www.biospectrumasia.com
S$ 5.00

BioSpectrum

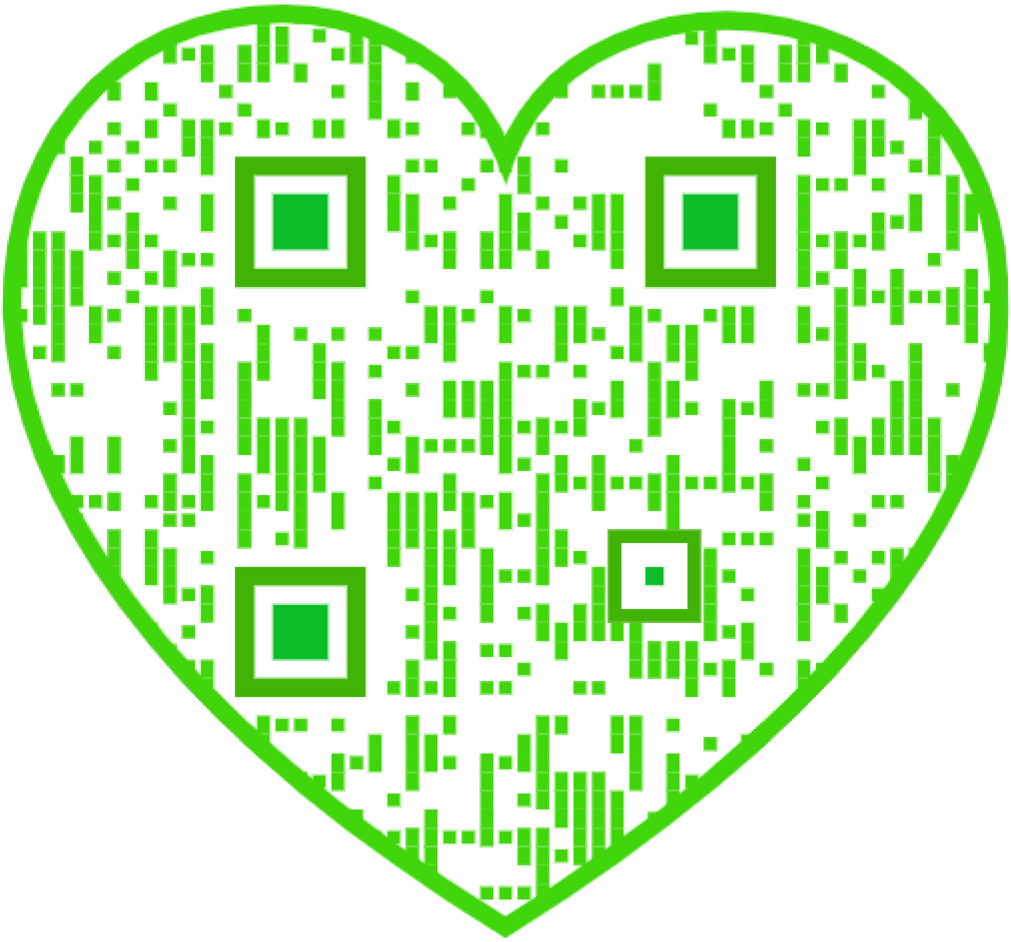
the business of Bio & Health Sciences
Volume 20 | Issue 2 | February 2025
ASIA EDITION

APAC Takes Centre Stage in AI-Driven Drug Discovery

31 *"China and Asia are already the global leaders of Antibody-drug conjugates"*
- Dr Jimmy Wei, President, Chime Biologics

27 *Accelerating Cancer Treatment with Precision Medicine & NGS*

BioSpectrum is an MM ACTIV publication; MCI (P) 025/06/2024



BioStartUps
Leading Platform for Emerging StartUps

Embark on a journey of innovation with the BioStartUps Community!

Uncover cutting-edge breakthroughs in biotechnology, healthcare, and beyond.

Showcase your Company's Presence and Activities at TheBioStartUps.com

Establish Links with Industry Leaders, Visionary Investors, and Innovators!

Questions About TheBioStartUps.com? We are here to help!

Unite with like-minded entrepreneurs to propel your startup towards success.

BioStartUps
Leading Platform for Emerging StartUps
www.thebiostartups.com

Contact: vrushti.kothari@mmactiv.com for more information.

Precision and Efficiency
Delivering the Future Now
AI
EVA AIR Cargo

EVA AIR Cargo

Visit www.brcargo.com for routes, reservations and tracking information.

BioSpectrum
ASIA EDITION
BioSpectrum Asia Excellence Awards 2024:
Honouring Innovators in Asia's Thriving Life Sciences Sector
Businessperson of the year

Acknowledgement/ Feedback

An entrepreneur's journey is typically quite lonely but recognitions like the one from BioSpectrum Asia make it a little less lonely. Thank you for felicitation at the BioSpectrum Asia Excellence Awards 2024.

- **Dr Jogin Desai,** India

Aevice Health is honoured to be a recipient for BioSpectrum Asia award for Startup of the Year.

- **Adrian Ang,** Singapore

Thank you very much BioSpectrum Asia for the huge honour of the Entrepreneur of the Year award, and also for helping NousQ - CLiKX amplify our potential.

- **Dr Lynn Lim,** Singapore

IntegriMedical is honoured to receive the "Product of the Year 2024" award at the recent BioSpectrum Asia Excellence Awards. This recognition is a significant milestone for us, and we are grateful for the opportunity to be part of such a prestigious event.

- **Ashwini Prabhu,** US

Vol 20; Issue 2; February 2025

Publisher & Managing Editor:
Ravindra Boratkar

CEO:
Manasee Kurlekar
manasee.kurlekar@mmactiv.com

Editorial:
Chief Editor: Dr Milind Kokje
milind.kokje@mmactiv.com

Advisor - Content: Vijay Thombre

Editor: Narayan Kulkarni
narayan.kulkarni@mmactiv.com

Executive Editor: Dr Manbeena Chawla
manbeena.chawla@mmactiv.com

Assistant Editor: Nitesh Pillai
nitesh.pillai@mmactiv.com

Asst. Manager Content Creation and Coordination- APAC Region:
Hithaishi C. Bhaskar
hithaishi.cb@mmactiv.com

General Manager (Strategy and Marketing)
Ankit Kankar
ankit.kankar@mmactiv.com

Support- HR and Admin.: Asmita Thakar
asmita.thakar@mmactiv.com

Production & Design:
MM Activ Sci-Tech Communications
Anil Walunj

Cover Design:
Dominix Strategic Design Pvt. Ltd.

Business Enquiry:
Ankit Kankar
ankit.kankar@mmctiv.com

Subscription Services
Print Edition: Saradha Mani
saradha.mani@mmactiv.com

Digital Edition: Ankit Kankar
ankit.kankar@mmactiv.com

News Letter : Sudam Walekar
sudam.walekar@mmactiv.com

Database Executive: Sudam Walekar

Subscription Services: Apoorva Mahajan
apoorva.mahajan@mmactiv.com

Bio Spectrum Jobs: Poonam Bhosale
poonam.bhosale@mmactiv.com

MM Activ Singapore Pte. Ltd.

Singapore
MM Activ Singapore Pte. Ltd.
Saradha Mani
General Manager
#08-08, High Street Centre,
1 North Bridge Road, Singapore - 179094
Tel: +65-63369142 / **Fax:**+65-63369145
Mobile: +65-90681202
saradha.mani@mmactiv.com

Asia Pacific & South East Asia
Ankit Kankar
General Manager -
Strategy & Marketing
1st Floor, CIDCO Convention Center,
Sector 30A, Vashi, Navi Mumbai,
Maharashtra-400703.
Mobile: +91-9579069369
ankit.kankar@mmactiv.com

USA
BioSpectrum Bureau
MM Activ Sci-Tech Communications
Mobile: +65 90150305
digital@mmactiv.com

Europe
BioSpectrum Bureau
MM Activ Sci-Tech Communications
Mobile: +65 90150305
digital@mmactiv.com

Taiwan
Media Representative:
Ms Christine Wu
Image Media Services Company
2F-2, No. 35, Sec. 2, Flushing South Road,
Taipei 10665, Taiwan
Tel: +886-2-87734199
Fax:+886-2-87734200
Mobile: 886-937890533
E-mail: christine@imagemediatw.com
website: www.imagemediatw.com

China
Erika Cheng
RFCOMMS
E101, East Lake Villas, 35 Dongzhimenwai
Main Street, Dongcheng District,
Beijing 100027, P. R. China
Mobile: +86 17375668063
E-mail: erika.cheng@rfcomms.com

India
Apoorva Mahajan
Manager – Strategy & Partnerships
"NITON", No. 11/3, Block "C", Second Floor,
Palace Road, Bangalore, Karnataka- 560052
Tel: +91-80-41131912/13
Mobile: +91-7724025888
apoorva.mahajan@mmactiv.com

Photo: istockphoto

Go Digital:
To request subscription
email: ankit.kankar@mmactiv.com

Printed and published by Ravindra Boratkar
on behalf of MM ACTIV Singapore Pte Ltd.

Printed at Times Printers Private Limited
16 Tuas Avenue 5, Singapore 639340
Tel : +65-63112888

Reprinted in India for private Circulation

Chief Editor: Dr Milind Kokje

MCI (P) 025/06/2024

Copyright:
MMActiv Singapore Pte Ltd.

Letter from Publisher

Ravindra Boratkar
Publisher &
Managing Editor,
MD, MM Activ Sci-Tech
Communications Pvt. Ltd.

Dear Readers,

At least 75 drug candidates developed by pharmaceutical companies utilising artificial intelligence (AI) in their discovery process were undergoing clinical trials during the previous ten years, according to a Boston Consulting Group (BCG) study. The success rate of 80–90 per cent of the candidates who proceeded to Phase I clinical testing was impressive and far better than the industry average of 50–60 per cent. According to Morgan Stanley, over the course of ten years, the application of AI in drug research may result in 50 additional effective therapies, potentially generating a $50 billion industry. The cover story highlights that, although the US and Europe still lead in AI drug discovery, the APAC region is quickly closing the gap with the widespread availability of AI tools and resources.

Malaysia has greatly increased its market share in medical tourism while Thailand and Singapore are its primary rivals. To bring in more patients, Thailand, in particular, has taken several actions, including easing medical visa requirements. Our reporter noted that Malaysia's strategic investments, government backing, and strategic private-sector collaborations and efforts are well-positioned to solidify its place as a top medical tourism destination in the years to come, as the demand keeps increasing throughout the world.

Cancer is inherently diverse, with significant variations both between different tumours and among individuals. A study published in The Lancet reveals differences in lung cancer between Caucasian and Asian populations. These disparities extend across various factors, including epidemiology, genomics, standard therapies, and outcomes, all influenced by geographic and ethnic variations. Such differences play a key role in determining the most effective treatment for patients. Understanding the genetic underpinnings of cancer is vital for advancing precision oncology, which tailors treatments based on an individual’s genetic makeup. We have an article that takes a closer look at the progress being made in precision oncology in the Asia Pacific region.

When almost half of clinical trial stakeholders describe their working relationships as "complicated," it’s a sign that something needs to change. Clinical trial management involves several scientific, commercial, and practical requirements that the industry will continue to struggle to satisfy without more cooperation across research sites, sponsors, and stakeholders. An industry expert explains as clinical trials continue to grow in complexity, improved site-sponsored-CRO collaboration will become increasingly essential for bringing new treatments to patients more quickly and efficiently.

The Middle East faces unique healthcare challenges, including a high prevalence of chronic diseases like diabetes and cardiovascular disease, coupled with an ageing population. This has fuelled the demand for advanced diagnostic and treatment technologies. Investments in public-private partnerships, healthcare digitisation, and medical tourism have further accelerated the growth of the medtech and diagnostics market. The emphasis on preventive healthcare and early disease detection is also accelerating the adoption of innovative diagnostic solutions. In a column, an expert pointed out that with strong government support, substantial investments, and commitment, the Middle East is poised to become a global leader in healthcare innovation.

I am sure you will find this edition a great read.

Thanks & Regards,

Ravindra Boratkar
Publisher & Managing Editor

COVER 19

APAC takes Centre stage in AI-Driven Drug Discovery

The Asia-Pacific (APAC) region is rapidly emerging as a leader in AI-driven drug discovery, fuelled by robust research ecosystems and strong industry collaboration. Substantial investments, cutting-edge technologies, and strategic partnerships are optimising drug development efficiency. As Artificial Intelligence (AI) has become more embedded into many facets of everyday life, it has become an indispensable part of the drug discovery landscape. 2024 was the year of reckoning when AI in drug discovery received the highest validation—three researchers who leveraged the neural network AI programme AlphaFold to predict protein structures won the Nobel Prize in Chemistry. The industry is pushing ahead, using tech to make the business of drug development faster, safer, and more economical. Morgan Stanley estimates that AI's use in drug development could lead to 50 more successful treatments over a decade, potentially creating a $50 billion market. Let’s explore the region's efforts in accelerating drug development through AI.

24

APAC leverages its advancements in computing power, regulatory flexibility, and large-scale data integration

Dr Isaac Bentwich,
Founder and CEO,
Quris-AI, Israel

Precision Oncology

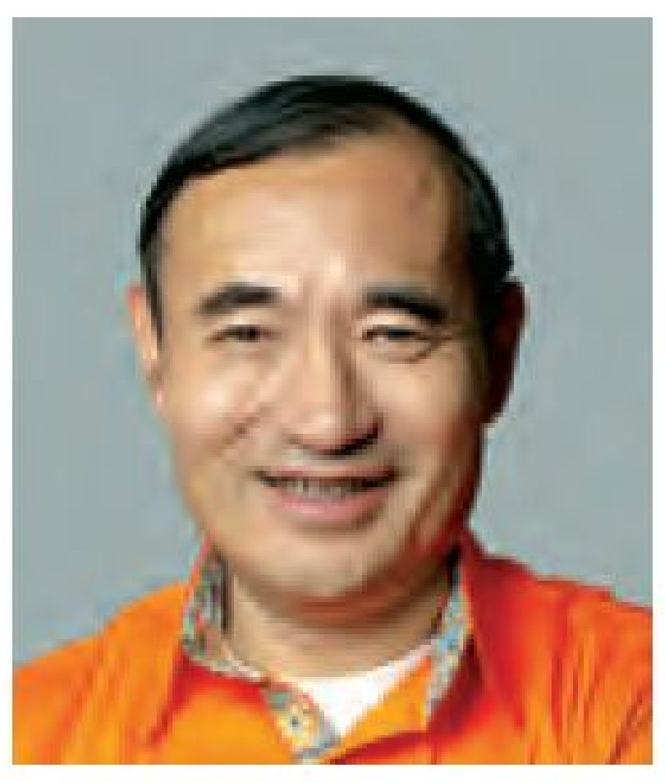
27 Accelerating Cancer Treatment with Precision Medicine & NGS

Med Tourism

29 Malaysia Turns Key Med Tourism Hub

Speaking With

31
"China and Asia are already the global leaders of Antibody-drug conjugates"
Dr Jimmy Wei,
President, Chime Biologics



33
"There is a need for pharmaceutical companies to build HCP relationships, backed by scientific credibility"
Amit Vithal,
Co-founder and Chief of Growth, Docquity, Singapore

35
"There remains a high unmet need for new & alternative treatment options for prurigo nodularis & atopic dermatitis"
Gerry Muhle,
Head of Global Product Strategy, Galderma, Switzerland

37
"Demand for skilled medtech professionals in the Asia Pacific region is growing rapidly"
Marc Radatt,
Chief Executive Officer, Olympus Corporation Asia Pacific, Singapore

BioSpectrum
ASIA EDITION

Scan QR code to access BioSpectrum Asia Digizine

Middle East

39
Middle East: A rising powerhouse in Medtech and Diagnostics
Garima Malhotra,
Associate Partner, Healthcare and Lifescence, Praxis Global Alliance

Clinical Trials

41
When Clinical Trials Suffer From 'Complicated' Interactions
Dr Christine Senn,
Senior Vice President, Site-Sponsor Innovation, Advarra

REGULARS

BioMail 04
Letter from Publisher 05
BioEdit 08
Policy and Regulatory News 09
Finance News 11
Company News 13
Start-Up News 15
World News 17
Academics News 43
People News 44
R&D News 46
Supplier News 48
Lets Talk Health 50

THREE STEPS FORWARD, ONE BACK?

Dr Milind Kokje
Chief Editor
milind.kokje@mmactiv.com

Drug approval, even post drug development, is a long process, involving many clinical trial phases. In some cases, a drug approved by a regulator in one country may bag approval in a shorter period in another country. Still, receiving approval from regulators is usually a long, time-consuming process. Pharmaceutical companies are naturally interested in faster approvals since turnaround time taken for their return on investment is quicker. Governments, too, have realised the importance of faster approvals to make available new drugs to their citizens as early as possible after their successful development.

With that aim, several governments keep reviewing their approval processes at certain intervals to make amendments to remove gaps and bottlenecks, and reduce the timelines for approvals. South Korea is one more country to join this process. It has embarked upon the process to enable faster drug approvals. Its Ministry of Food and Drug Safety (MFDS) has announced "Innovation Plan for Drug Approval," an initiative which has significant reforms for streamlining the approval process this year. The process began a while back with the suggested reforms announced in September. Now, after deliberations and finalisation, the reforms are being implemented. South Korea probably had to move in this direction of reforms since it is slower in introducing new drugs in the country.

Only 33 per cent of the drugs introduced globally are available in South Korea. Compared to this, 85 per cent drugs were available in the US. The average approval waiting period for new drugs is 28 months in South Korea. Its current reforms to streamline drug approval processes include reducing time required for registering imported Active Pharmaceutical Ingredients (APIs). The reform aims to significantly reduce the registration time from 120 days to 20 days. The documentation for Good Manufacturing Practices (GMP) has been reduced from 11 types to just 4.

The reforms also allow low risk manufacturers to extend GMP certification through a simplified paper-based review if no significant changes have occurred. Currently, on-site inspection is mandatory. Such steps would simplify compliance procedures at least for low-risk manufacturers. Most importantly, MFDS aims to complete the entire approval process for new drugs within a specified period of 295 days. A similar specific timeline of 90 days is set for GMP evaluation of a factory. Along with these measures, a dedicated task force is set up to handle new drug approval. This will increase company consultations and will also increase reviews from 3 to 10 sessions. It also plans to increase the new drug review workforce from 30 per cent to 70 per cent.

Of course, the reforms and set timelines come with a cost as the fees for all processes too have been increased from February 1 after long consultation with the industry. It will be 410 million KRW taking into account the resources required for faster and more transparent processes. The fee for general pharmaceutical products is also planned to be increased later. A BMI report has projected that pharmaceutical sales will grow at a CAGR 10 per cent and expected to reach $40.6 billion by 2028. Experts feel that though growth is expected due to the reforms in approval processes, the steep hike in the fees from 9 million KRW may prevent pharma companies from launching their new products in South Korea on a priority basis.

As informed by the Bio-Economy Research Centre of the Korea Biotechnology Industry Organisation, in the 50 drugs approved by US FDA last year, the contribution of South Korean companies is significant. The number of products of South Korean companies has increased little over the one year before that. Maybe some more Asian countries would like to follow the path of expediting drug approvals. They would like to watch how the reforms in South Korea would work this year. The process may provide several lessons to others about moving ahead swiftly on the approval path, without compromising on the efficacy, quality and safety. BS

China approves GSK's Nucala for treatment of adults with chronic rhinosinusitis

China National Medical Products Administration (NMPA) has approved GSK's Nucala (mepolizumab), a monoclonal antibody that targets interleukin-5 (IL-5), as an add-on therapy with intranasal corticosteroids for the treatment of adult patients with chronic rhinosinusitis with nasal polyps (CRSwNP) for whom therapy with systemic corticosteroids and/or surgery do not provide adequate disease control. The approval is based on results of the phase III MERIT trial, which studied the efficacy and safety of mepolizumab over a 52-week period versus placebo in a population of Japanese, Chinese and Russian patients with inadequately controlled CRSwNP, and is supported by data from the global phase III SYNAPSE study, which explored the effect of mepolizumab versus placebo in more than 400 patients with CRSwNP. Mepolizumab is already approved in China as an add-on maintenance treatment for adults and adolescents aged 12 years and older with severe eosinophilic asthma as well as for adults with eosinophilic granulomatosis with polyangiitis.

Australia partners with Thailand, Malaysia to enhance local vaccine & medicine manufacturing capabilities

Scientists from Australia's Biomedical Manufacturing Programme are partnering with Thailand and Malaysia to enhance their local vaccine and medicine manufacturing capabilities. This initiative aims to improve access to affordable, high-quality medications and strengthen health systems across the region. In particular, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), an Australian Government agency responsible for scientific research and its commercial and industrial applications, has signed two project agreements with Thailand's National Centre for Genetic Engineering and Biotechnology (BIOTEC), National Science and Technology Development Agency (NSTDA); Government Pharmaceutical Organisation (GPO) and the National Biopharmaceutical Facility (NBF), King Mongkut's University of Technology Thonburi (KMUTT). Both projects will emphasise hands-on training, workshops and process development both in Thailand and at the National Vaccine and Therapeutics Laboratory (NVTL) in Melbourne. These efforts will enable Thai scientists to train colleagues at home, fostering greater health independence for the region.

Singapore launches Global Heat Health Information Network Southeast Asia Hub

The Heat Resilience & Performance Centre (HRPC) at the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine) has been officially designated as the Global Heat Health Information Network (GHHIN) Southeast Asia (SEA) Hub, a recognition that underscores its leading role in advancing heat resilience. This designation highlights the Centre's expertise in addressing the growing challenges of heat-related health risks in the region. With this appointment, the Centre is poised to play a pivotal role in working with the region to shape strategies, research, and policies aimed at mitigating the impact of extreme heat on public health, demonstrating its commitment to building resilience in the face of climate change. Chairing the GHHIN Southeast Asia Hub, is Associate Professor Jason Lee, also the Director at the HRPC at NUS Medicine, who brings a wealth of research and translational experience that will help guide and accelerate the conversions specific to the SEA region.

UAE nears completion of National Health Survey

The Ministry of Health and Prevention (MoHAP) in the United Arab Emirates (UAE) has announced a significant milestone in its national surveys project, with 95 per cent completion rate for the National Health Survey and 78 per cent for the National Nutrition Survey, marking a significant step toward building a robust health database. The national surveys project is set to enhance the UAE's health system's readiness for the next 50 years by aligning it with international best practices and adopting innovative healthcare solutions. Beyond its local impact, the project aims to strengthen the UAE's ranking in global health competitiveness indices. The progress achieved so far has been made possible thanks to the institutional integration and strategic partnerships, bringing together the Ministry, the Federal Competitiveness and Statistics Centre, local statistical centres, and other relevant health authorities. As part of their collaboration, they utilise cutting-edge technologies and international methodologies for data collection and analysis, ensuring the accuracy and reliability of results. The survey outcomes would provide a robust foundation for shaping future health policies and programmes.

Japan gives nod to first subcutaneous immunoglobulin (fSCIG) therapy

Japanese Ministry of Health, Labour and Welfare has approved the use of Takeda's HYQVIA [Immune Globulin Infusion 10 per cent (Human) with Recombinant Human Hyaluronidase] in patients with agammaglobulinemia or hypogammaglobulinemia, disorders characterised by very low or absent levels of antibodies and an increased risk of serious recurring infection caused by primary immunodeficiency (PID) or secondary immunodeficiency (SID). The approval marks availability of the first and only facilitated subcutaneous immunoglobulin (fSCIG) therapy as a treatment option for appropriate patients in Japan. HYQVIA is the first plasma-derived therapy for subcutaneous injection in Japan that consists of a combination of one vial of Immunoglobulin 10 per cent and one vial of Recombinant Human Hyaluronidase PH20 (rHuPH20). The administration of rHuPH20 increases the dispersion and absorption of immunoglobulin (IG) in the subcutaneous tissue, allowing larger volumes to be infused in the infusion site.

CDSCO to not allow import of refurbished medical devices to India

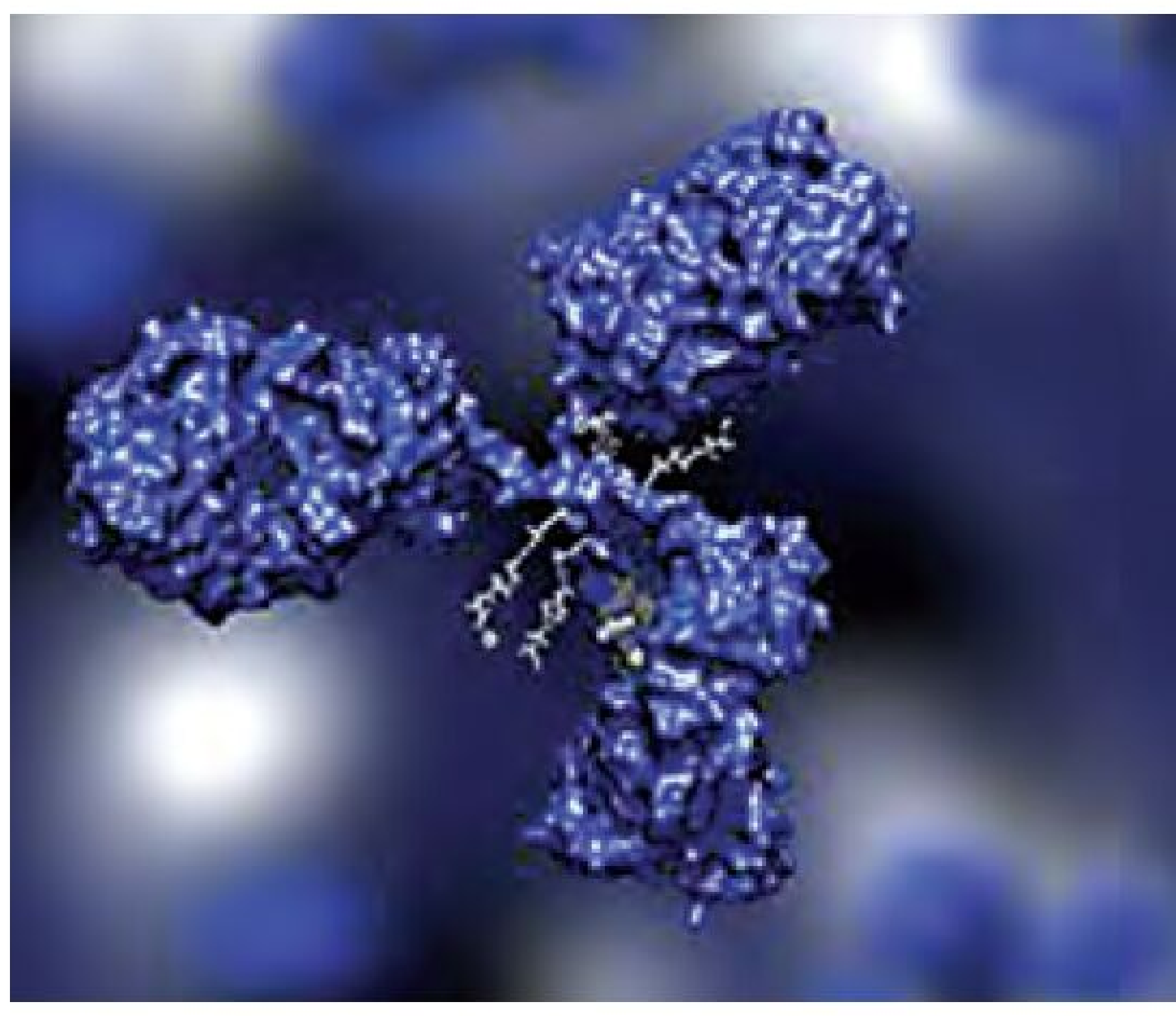
Medical device manufacturers in India have hailed the clarification by the Central Drugs Standard Control Organization (CDSCO) that current law does not provide for granting of licenses for import of refurbished devices. A letter from the CDSCO's medical division to the Office of Principal Commissioner of Customs states that all the medical devices are regulated under Medical Devices Rules (MDR), 2017, but there is no specific provision for regulation of refurbished medical devices under the said rules. Hence, no license is issued for import of such devices and it cannot be imported in the country under MDR, 2017 for sale and distribution. Confusion arose earlier after a notification by the Ministry of Environment, Forest, and Climate Change (MoEFCC) allowed the import of certain second-hand medical devices and equipment in India. India's import bill for medical devices is going up every year, with a 13 per cent jump in 2023-24 alone. India currently imports a staggering Rs 69,000 crore worth of devices.

Kaneka acquires 96.8% of shares of EndoStream Medical

Japanese firm Kaneka Corporation has acquired 96.8 per cent of shares of EndoStream Medical (ESM), an Israeli medical equipment company. By combining Kaneka's manufacturing and ESM's technology, both companies will jointly develop new medical devices, mainly for cerebrovascular treatment, in addition to the Nautilus device for aneurysm treatment currently under development. Both companies jointly aim to achieve sales of over 20 billion yen by 2030. ESM is a manufacturer of innovative technologies in the field of cerebrovascular diseases and is developing a device for the treatment of cerebral aneurysms called "Nautilus" that can treat aneurysms with wide openings in cerebral blood vessels, which has been awaited by neurovascular community for many years. The device has a special structure that can be used in combination with an aneurysm embolisation coil to block blood flow to the aneurysm, facilitating treatment that would otherwise be difficult with existing devices. The product received regulatory approval in Europe in November 2024, with plans for approval and launch in the United States in the spring of 2026 and in Japan one year later.

Innovent Biologics enters into billion-dollar oncology deal with Roche

China-based Innovent Biologics, Inc., a world-class biopharmaceutical company that develops, manufactures and commercialises high quality medicines for the treatment of oncology, cardiovascular and metabolic, autoimmune, ophthalmology and other major diseases, has announced a collaboration and exclusive license agreement with Swiss pharma firm Roche to advance the development of IBI3009, a novel DLL3-targeted antibody drug conjugate (ADC) candidate. IBI3009 has already obtained IND approvals in Australia, China, and the US, with the first patient for the Phase 1 study dosed in December 2024. This collaboration aims to bring innovative treatment options to patients with advanced small cell lung cancer. Under the agreement, Innovent has granted Roche exclusive global rights to develop, manufacture and commercialise IBI3009. The two parties will jointly focus on the early-stage development of this ADC candidate, after which Roche will take over full development.



Merck strikes partnership worth $1.9 B with Chinese biotech Hansoh

Merck, known as MSD outside of the United States and Canada, and Hansoh Pharma, a Chinese biopharmaceutical company, have entered into an exclusive global license agreement for HS-10535, an investigational preclinical oral small molecule GLP-1 receptor agonist. Under the agreement, Hansoh Pharma has granted Merck an exclusive global license to develop, manufacture and commercialise HS-10535. Hansoh Pharma will receive an upfront payment of $112 million and is eligible to receive up to $1.9 billion in milestone payments associated with the development, regulatory approval and commercialisation of the candidate, as well as royalties on sales. Hansoh Pharma may co-promote or solely commercialise HS-10535 in China subject to certain conditions. Merck will record a pre-tax charge of $112 million, or $0.04 per share, to be included in GAAP and non-GAAP results in the fourth quarter of 2024. Through this agreement, the companies aim to build on their experience targeting incretin biology to evaluate HS-10535 and its potential to provide additional cardiometabolic benefits beyond weight reduction.

Abu Dhabi announces AED 19 M in grants through Healthcare Research and Innovation Fund

The Department of Health – Abu Dhabi (DoH), the regulator of the healthcare sector in the Emirate, in partnership with the Authority of Social Contribution – Ma'an, the Abu Dhabi Government's dedicated platform that connects the government, private sector, and wider community to address key social priorities, has awarded over AED 19 million in grants through the Healthcare Research and Innovation Fund. These grants will support advancements in groundbreaking fields such as cell and gene therapies, precision medicine, and advanced cancer treatments, with the goal of transforming healthcare delivery and improving patient outcomes. The grant recipients are focused on advancing cancer research, leveraging technology and improving chronic disease management, by offering solutions such as virtual reality for breast cancer survivors, paediatric metabolic health, precision medicine, and treatments for inherited eye diseases. These diverse initiatives reinforce the transformative potential of medical research in solving pressing healthcare issues.

Neuberg Diagnostics secures Rs 940 Cr from Kotak Alt

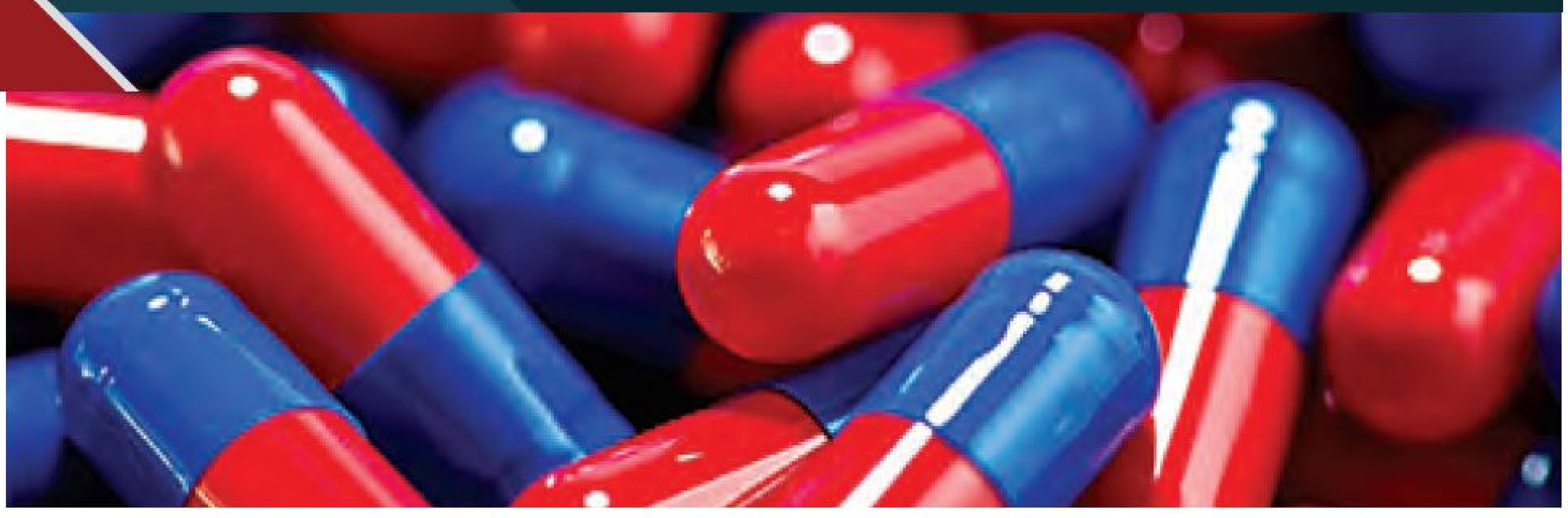
Neuberg Diagnostics has secured Rs 940 crore from Kotak Alt in the largest-ever primary fund-raise in the Indian diagnostics sector. Founded in 2017 and headquartered in Chennai, Neuberg Diagnostics has rapidly emerged as the fastest-growing, largest integrated diagnostics player in the country and one of the top 4 largest diagnostics providers of Indian origin. With an extensive network spanning over 10,000 touch points and 250+ labs across 250 cities, the company is well on its way to transforming the healthcare landscape in India. It boasts a highly skilled team of clinical pathologists, oncopathologists, biochemists, geneticists, and other certified lab professionals, giving it the capability to perform over 5,000 types of tests. This funding will enable Neuberg to enhance its capabilities in the areas of personalised medicine, integrated diagnostics and inorganically expand footprint across the country. As the company prepares for an IPO, the company remains committed to making high-quality diagnostics accessible to all. o3 Capital acted as the exclusive financial advisor to Neuberg Diagnostics for their fundraise from Kotak Alt.

SK bioscience inks KRW 75.5 B deal with Sanofi to develop PCVs

South Korea-based SK bioscience and French pharmaceutical firm Sanofi have announced the signing of an expanded agreement to co-develop next-generation pneumococcal conjugate vaccines (PCVs) for both paediatric and adult populations, with the potential to provide broader protection than those currently licensed. This agreement builds on the companies' existing collaboration to develop and commercialise the GBP410, a 21-valent pneumococcal conjugate paediatric vaccine candidate. Together, the companies aim to develop innovative next-generation PCVs beyond GBP410. At the same time, SK bioscience and Sanofi are one step closer to commercialising GBP410 by initiating the phase 3 clinical programme. GBP410 is the first pneumococcal conjugate vaccine candidate with more than 20 serotypes to enter phase 3 in infants and toddlers, making it a highly anticipated innovation in the market. Under the terms of the agreement to co-develop next-generation PCVs, Sanofi will pay SK bioscience an upfront payment of EUR 50 million (KRW 75.5 billion) followed by development and commercial milestone payments.

Samsung Biologics extends collaboration with LigaChem Biosciences for ADC development

South Korea-based Samsung Biologics, a global contract development and manufacturing organisation (CDMO), has announced plans to extend collaboration with LigaChem Biosciences to provide antibody-drug conjugate (ADC) services. Samsung Biologics will support a series of LigaChem Biosciences' ADC programmes at Samsung Biologics' new dedicated ADC facility. The two companies have already been collaborating on ADC programmes for the treatment of solid tumours. LigaChem Biosciences is a biotech pioneering research and development of ADC candidates. The company's ADC facility is a segregated suite, equipped with a 500-liter reactor, supporting the development and manufacture of ADC therapies. Building on the company's track record of expertise in large-scale antibody manufacturing and process engineering, Samsung Biologics' ADC service scope spans late discovery to development and conjugation.



Lonza expands capsule manufacturing capacity in India and China

Lonza, a global manufacturing partner to the pharmaceutical, biotech and nutraceutical markets, has announced capacity expansions at its sites in Rewari (India) and Suzhou (China). The expansions include additional hard gelatin capsule (HGC) lines to support the manufacture of high-quality hard gelatin capsules, including essential and specialised capsules for the pharmaceutical and nutraceutical industries. The capacity expansion represents another step in the implementation of Lonza Capsules and Health Ingredients or CHI's hard empty capsules network strategy, focusing on long-term competitiveness and meeting the highest quality and sustainability standards. HGCs represent highly functional and versatile capsules that can support various applications across the pharmaceutical and nutraceutical markets by encapsulating liquid or solid fills. With lines at Suzhou and Rewari sites operational from Q4 2024 and additional lines due to start operations in Q3 2025, the additional manufacturing capacity aims to enhance Lonza CHI's offering to meet regional market demand and promote innovation.

Fujirebio and Eisai to establish diagnostic technologies for neurodegenerative diseases

Fujirebio Holdings, a wholly-owned subsidiary of H.U. Group Holdings, Inc., and Eisai Co., in Japan, have entered into a Memorandum of Understanding (MoU) for the joint research and social implementation of novel blood-based biomarkers in the field of neurodegenerative diseases. Fujirebio and Eisai have been conducting joint research on cerebrospinal fluid biomarkers related to Alzheimer's disease (AD). The two companies have agreed to move forward with their partnership based on the shared understanding that the development and commercialisation of diagnostic methods for neurodegenerative diseases can be accelerated by integrating the long-standing respective expertise of Fujirebio, which has experience in the research and development of test reagents in the neurodegenerative disease field, and Eisai, which has been engaged in the research and development of therapeutics in the field of dementia. The partners plan to explore a wide range of possibilities for the collaboration, including the clinical implementation of diagnostic reagents for plasma phosphorylated tau 217 protein (p-Tau217), the research and development of simple diagnostic methods using novel blood-based biomarkers and the development and commercialisation of in vitro diagnostics.

SCG Cell Therapy to accelerate RNA-based therapeutic development in Singapore

SCG Cell Therapy, a clinical-stage biotechnology company developing novel immunotherapies for infectious diseases and their associated cancers, has announced the signing of a Memorandum of Understanding (MoU) with A*STAR Bioprocessing Technology Institute (BTI) and Nucleic Acid Therapeutics Initiative (NATi) to advance RNA-based therapeutics manufacturing process development and clinical translation. The MoU enables the combination of A*STAR BTI and NATi's research and development (R&D) capabilities in bioprocessing technologies, biomarker discovery and target validation with SCG's local GMP manufacturing capability and global clinical development, to accelerate RNA-based cell and gene therapy and mRNA vaccine commercialisation from concept to patient-centric delivery. In line with the MoU, the three parties will work together on collaborative projects related to RNA manufacturing process development, analytics, automation, and digitalisation. A joint laboratory will be established, including cGMP runs in SCG's pilot manufacturing facility in Singapore, as well as a joint talent development programme to train the next generation of scientists and engineers in Good Manufacturing Practices.

AbbVie Biopharma strengthens digital strategies for clinical trials in Taiwan

CLINICAL TRIAL

National Taiwan University Hospital (NTUH) and AbbVie Biopharmaceuticals GmbH Taiwan Branch (AbbVie) have signed a cooperation agreement, with the agreement jointly signed by President Ming-Shiang Wu of NTUH and General Manager Richard Sun of AbbVie. The parties will expand their research and development collaboration, strengthen the digital strategy for clinical trials, and leverage new forms of clinical trial research models to accelerate the speed and quality of trial approvals. This collaboration will promote prospective clinical trial research, offer new hope for patient treatments, and work together to enhance the quality and international competitiveness of clinical trials. In response to the global trend towards the digitalisation of clinical trials, AbbVie has been actively advancing the digitalisation of clinical trials in recent years. Since 2013, NTUH and AbbVie have maintained a strong and collaborative partnership. To date, they have jointly conducted 72 clinical trial cases, achieving a 45 per cent growth in both the number of cases and acceptance rate.

Bio-Thera Solutions & Tabuk Pharma to commercialise Stelara biosimilar in Saudi Arabia

China-based Bio-Thera Solutions Inc., a commercial-stage biopharmaceutical company developing a pipeline of innovative therapies and a pipeline of biosimilars, has partnered with Tabuk Pharmaceutical Manufacturing Company (a fully-owned subsidiary of Astra Industrial Group), a leading pharmaceutical company in the Middle East and North Africa (MENA) region, for BAT2206, its ustekinumab biosimilar, under which Tabuk will have exclusive rights to manufacture, distribute and market the drug in Saudi Arabia. BAT2206 is a proposed biosimilar to Jansen's Stelara. Bio-Thera has filed for regulatory approval of BAT2206 with the China National Medical Products Administration (NMPA), the European Medicines Agency (EMA) and the United States Food and Drug Administration (FDA). This partnership will leverage Tabuk's strong local presence, sales and marketing capabilities in Saudi Arabia. Under this agreement Tabuk Pharmaceuticals will hold the marketing authorisation and will be responsible to manufacture, register, import, and promote BAT2206 in Saudi Arabia.

Samsung Ventures invests in Pison to improve neurocognitive performance

US-based startup Pison, the trailblazer in artificial intelligence (AI)-powered neural sensors for cognitive health, wellness, and gesture control, has announced an equity investment from South Korea-based Samsung Venture Investment Corporation (Samsung Ventures). This investment highlights the dedication of Samsung Ventures to advancing future healthcare technology and acknowledges Pison's potential in neurocognitive assessment and tracking capabilities. Pison's innovative sensor technology detects brain activity from three nerve bundles in the wrist. Using both active and passive AI algorithms, it extracts neurocognitive data, providing insights into mental acuity and impairment from poor sleep, chronic fatigue, anxiety, neurodegenerative conditions, drugs, alcohol, and subconcussive brain injuries. Pison was founded in 2016 with funding from the Massachusetts Institute of Technology, National Science Foundation, and the ALS Association.

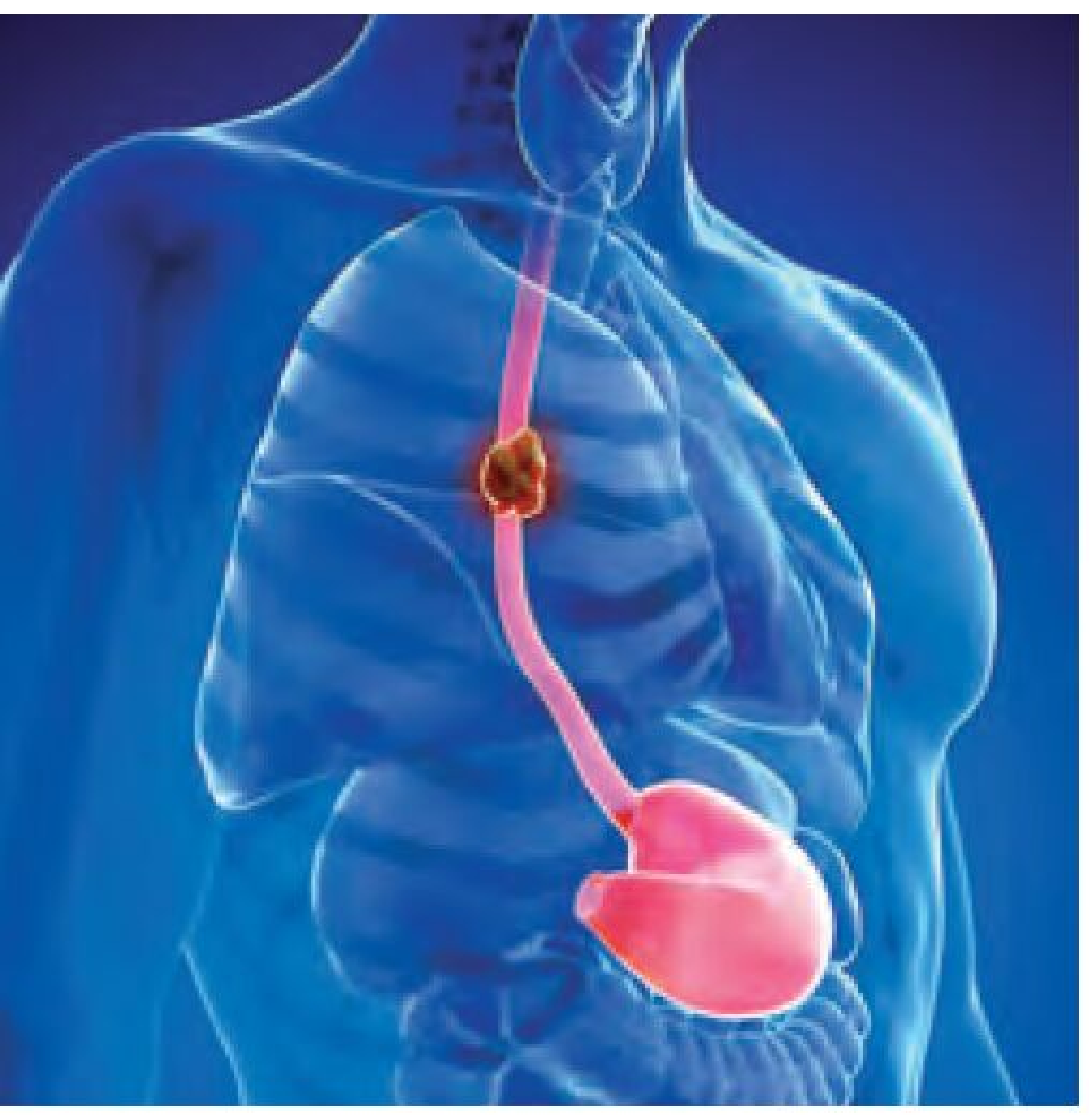
Australian startups receive $18.5 M to commercialise novel research

The Australian government is investing $18.5 million to help eight Australian startup companies to commercialise their research and help turn their discoveries into new medicines and treatment tools for cancer, pregnancy complications, eye damage, and other conditions. Mirugen has received almost $2 million to develop a gene therapy which could potentially cure some types of blindness by regenerating cells in the eye to help restore vision. OncoRes Medical will receive $2.5 million to create a device to help surgeons to better identify cancer cells during surgery. Baymatob Operations has been awarded almost $2.5 million to finalise software that can identify pregnant women likely to experience severe bleeding during childbirth. This funding will also support Amplificare to develop a drug that will help doctors find out earlier if cancer treatment has been successful; Currus Biologics to improve the success of CAR T-cell therapy for treatment of solid tumour cancers like cancers of the breast, colon, pancreas and prostate; Kinoxis Therapeutics to test a new drug to reduce agitation and aggression in people with dementia; Micromune Therapeutics to develop a safer and more effective drug to treat inflammatory bowel disease, and SeeTreat to create software to reduce the side effects of breast cancer treatment by making radiation therapy more accurate so it only targets cancerous cells.

Primo Biotech partners with SHINE Technologies to advance precision cancer care in APAC

Taiwan-based startup Primo Biotechnology has announced a strategic partnership with US-based SHINE Technologies, LLC, a global leader in nuclear medicine production. The partnership includes a supply and exclusive distribution agreement to introduce Ilumira (n.c.a. lutetium-177, Lu-177), SHINE's high-purity therapeutic isotope, to Taiwan and the broader Asia-Pacific (APAC) market. This collaboration is set to strengthen Primo's market presence, accelerate advancements in radioligand theranostics (RLT), and usher the region into the next era of precision medicine. Ilumira represents a significant breakthrough in nuclear medicine. As a key innovation in radioligand therapy, this isotope provides patients with more precise and effective treatment options, particularly for hard-to-treat tumours. By addressing the growing demand for advanced cancer therapies, Primo aims to deliver comprehensive solutions from early diagnosis to late-stage treatment, further enhancing healthcare outcomes across the Asia-Pacific region.

RNT Health Insights receives 2nd US FDA BDD for oesophageal cancer detection tool



RNT Health Insights, an Indian health-tech startup specialising in AI-assisted diagnostic solutions for the accurate detection of pathologies during endoscopic procedures, has been granted its second US FDA Breakthrough Device Designation (BDD) for its Oesophageal Cancer detection tool. This tool aids gastroenterologists in the real-time detection and identification of early-stage and advanced esophageal cancers during standard white-light upper GI endoscopy procedures. RNT Health Insights' tool effectively aids in detecting subtypes such as adenocarcinoma, and dysplasia associated with Barrett's oesophagus. While not intended to replace clinical decision-making, this technology integrates into existing clinical workflows, ensuring endoscopists can maintain full control over decision-making while benefiting from enhanced diagnostic support. This tool intends to greatly improve the accuracy of detection of early-stage lesions, reducing the missed detection rate thereby significantly improving patient outcomes.

Docquity and HCDC partner to strengthen preventive medicine education in Vietnam

Singapore-based startup Docquity is working with the Ho Chi Minh City Center for Disease Control (HCDC), a leading public organisation dedicated to preventive medicine, to bolster healthcare provider (HCP) education in Vietnam in response to the country's evolving healthcare needs. The organisations will collaborate to create a dedicated educational channel, hosted on the Docquity application, to provide preventive medicine HCPs across Vietnam with learning resources over three years. HCDC will harness Docquity's in-depth HCP network insights, platform technologies, and content expertise to securely manage the educational channel, targeting to reach over 3,000 Vietnamese HCPs in preventive medicine, family medicine, general practice, internal medicine, nutrition, nursing, public health, and other fields. The channel's learning resources will empower HCDC's existing network and the broader HCP community in the country with up-to-date information on disease prevention advancements and professional guidelines. The collaboration with HCDC further expands Docquity's leading network of preventive medicine HCPs and other medical professionals, aligning with its commitment to equip more HCPs across Southeast Asia with knowledge and tools to improve healthcare delivery.

Alebund Pharmaceuticals announces first closing of RMB 550 M in Series C financing

Shanghai-based Alebund Pharmaceuticals, an integrated biopharmaceutical company focusing on developing innovative therapies for renal diseases and related chronic conditions, has announced the closing of RMB 550 million in Series C financing. Participating investors in this round include a renowned healthcare fund, Yangzhou Guojin Investment Group Co., and Kingray Capital. This round of financing will support Alebund in advancing the development and commercial activities of its pipelines in renal disease and to accelerate the development of multiple clinical-stage programmes. The fund will support accelerating new drug application (NDA) in China for the best-in-class iron-based phosphate binder AP301 and the conduct of its global pivotal study; the conduct of US/China phase 2 study for the first-in-class pan phosphate transporter inhibitor AP306, and further commercial expansion for Mircera in China. Focusing on developing innovative treatments for renal diseases, Alebund has built a diversified and balanced pipeline of drug candidates.

CEPI, US DFC join forces to tackle future pandemic threats

Norway-based Coalition for Epidemic Preparedness Innovations (CEPI) and the US International Development Finance Corporation (DFC) have announced a new intention to collaborate and advance global health security by aligning their discussions and investments in global vaccine initiatives, including exploring sustainable pandemic financing tools and supporting localised vaccine production efforts. Under the new partnership, CEPI and the DFC recognise that fighting infectious disease threats requires a sustained whole of society effort, including leveraging the private sector to finance solutions. The institutions will work together to coordinate and share information with one another on existing projects already funded or otherwise supported by both organisations. They will also look at new innovative vaccine and epidemic preparedness technologies that could be of mutual interest for joint, coordinated investment. Additionally, CEPI will support the DFC on the design and implementation of innovative financing mechanisms that could expand predictable, fast and sustainable funding to support vaccine R&D, vaccine manufacturing and scale-up activities in preparation for a future outbreak, as well as surge financing to quickly respond to a fast-emerging viral threat.

Gavi facilitates donations of mpox vaccine doses, with first delivery to Nigeria

A shipment of 11,200 doses, donated by the United States of America and facilitated by Gavi, the Vaccine Alliance, were recently shipped to Abuja, Nigeria. This follows agreements signed in November by Gavi to facilitate the donation of 305,000 doses of mpox vaccine to support the global and continental response. The doses, manufactured by Bavarian Nordic, have been allocated to affected countries through the Access and Allocation Mechanism (AAM) for mpox, led by the Africa Centres for Disease Control and Prevention, the Coalition for Epidemic Preparedness Innovations (CEPI), Gavi, UNICEF and the World Health Organization (WHO). These doses are part of the 899,000 doses allocated through the AAM first round to nine African countries hardest hit by the mpox outbreak. Gavi will also use the First Response Fund to cover the delivery costs of the doses it procures or facilitates. The funding was established this year in response to key lessons from the COVID-19 pandemic.

PAHO launches interactive dashboard to monitor avian influenza in the Americas

The Pan American Health Organization (PAHO) has launched an interactive dashboard to monitor avian influenza A(H5N1) cases in the Americas. This tool is designed to improve access to data on outbreaks of this disease in birds, mammals, and humans, providing key information for public and animal health authorities. The dashboard features tables and maps showing outbreaks in humans, as well as in domestic and wild birds and mammals across the region, the latter with data sourced from the World Organization for Animal Health (WOAH). Through this resource, PAHO strengthens its active surveillance efforts to prevent potential transmission of the disease to humans. The platform not only provides data on outbreaks but also on symptoms presented by patients, based on information provided by countries. This level of detail can help public health authorities be better prepared to detect and make informed, swift decisions during an outbreak.

UK declares biggest investment of £126 M into hospices

The biggest investment in a generation for hospices has been announced by the UK government, ensuring that hospices can continue to deliver the highest quality end of life care possible for their patients, families, and loved ones. The £100 million funding will help hospices this year and next to provide the best end of life care to patients and their families in a supportive and dignified physical environment. Hospices for children and young people will also receive a further £26 million revenue funding for 2025/26 through what until recently was known as the Children's Hospice Grant. This investment will go towards helping hospices to improve their buildings, equipment, and accommodation to ensure that patients continue to receive the best care possible. That will include refurbishing bedrooms and bathrooms for patients and providing comfortable overnight facilities for families, improving IT systems making it easier for general practitioners (GPs) and hospitals to share vital data on patients.

US awards $306 M in Avian Flu monitoring and preparedness funding

The US Department of Health and Human Services (HHS) is awarding $306 million to continue its H5N1 Avian Flu response. While Centers for Disease Control and Prevention's (CDC) assessment of the risk of avian influenza to the general public remains low, US Department of Agriculture (USDA) and HHS continue to closely collaborate with Federal, State, local, industry and other stakeholders to protect human health, animal health, and food safety. Administration for Strategic Preparedness and Response (ASPR) will award approximately $183 million in additional funding for regional, state and local preparedness programmes- $90 million to the Hospital Preparedness Program (HPP); $10 million to the National Emerging Special Pathogens Training and Education Center (NETEC); $26 million to the Regional Emerging Special Pathogen Treatment Centers (RESPTCs); $43 million to the Special Pathogen Treatment Centers (SPTCs) Avian Influenza Preparedness and Response Activities; $14 million to replenish equipment and supply caches for the National Disaster Medical System (NDMS). CDC will award approximately $111 million in funding for additional enhancements to monitor H5N1 at the local, state and national levels. Further, NIH will award approximately $11 million in funding for additional research into potential medical countermeasures for H5N1.

US FDA issues draft guidance for developers of AI-enabled medical devices

The US Food and Drug Administration (FDA) has issued draft guidance that includes recommendations to support development and marketing of safe and effective artificial intelligence (AI)-enabled devices throughout the device's Total Product Life Cycle. The guidance, if finalised, would be the first guidance to provide comprehensive recommendations for AI-enabled devices throughout the total product lifecycle, providing developers an accessible set of considerations that tie together design, development, maintenance and documentation recommendations to help ensure safety and effectiveness of AI-enabled devices. This guidance complements the recently issued final guidance on predetermined change control plans for AI-enabled devices, which provides recommendations on how to proactively plan for device updates once the product is on the market. The FDA has also published draft guidance with recommendations regarding the use of AI to support development of drug and biological products.

APAC takes Centre stage in AI-Driven Drug Discovery

The Asia-Pacific (APAC) region is rapidly emerging as a leader in AI-driven drug discovery, fuelled by robust research ecosystems and strong industry collaboration. Substantial investments, cutting-edge technologies, and strategic partnerships are optimising drug development efficiency. As Artificial Intelligence (AI) has become more embedded into many facets of everyday life, it has become an indispensable part of the drug discovery landscape. 2024 was the year of reckoning when AI in drug discovery received the highest validation—three researchers who leveraged the neural network AI programme AlphaFold to predict protein structures won the Nobel Prize in Chemistry. The industry is pushing ahead, using tech to make the business of drug development faster, safer, and more economical. Morgan Stanley estimates that AI's use in drug development could lead to 50 more successful treatments over a decade, potentially creating a $50 billion market. Let’s explore the region's efforts in accelerating drug development through AI.

Drug discovery is a lengthy and costly process, typically requiring billions of dollars and nearly a decade to bring a drug to market. AI holds the promise of reducing both the costs and the timelines involved in this process. A study published by the Boston Consulting Group (BCG) found that at least 75 drug candidates developed by companies using AI in their discovery process were in clinical trials over the past decade. Impressively, 80-90 per cent of the candidates that entered phase I clinical testing were successful, a success rate considerably higher than the industry average of 50-60 per cent.

AI research in drug discovery primarily focuses on small molecules, with oncology as the leading area due to the growing global cancer burden. Immunology follows, with 21 per cent of companies using AI for immunological treatments. Fewer programmes target neurology and inflammation, according to Deep Pharma Intelligence.

Big pharma and AI

Big pharma has stepped up its efforts in the race to develop AI-based drugs, with nearly 100 partnerships identified between AI vendors and major pharmaceutical companies since 2015 as per a report from GlobalData. Among the leaders in this space are Pfizer, Takeda, and AstraZeneca, each with eight deals. Other pharmaceutical companies recently forging AI-related deals include Novartis, Bristol Myers Squibb (BMS), Roche, Janssen, Merck KGaA, Boehringer Ingelheim, Bayer, GSK, and Sanofi.

Noteworthy recent deals include an AI partnership between Eli Lilly and Novartis with Alphabet's digital biotech company Isomorphic Labs in January 2024. These companies will leverage Isomorphic's AI platform to develop small-molecule drugs for undisclosed targets. In November 2023, Roche also announced a multi-year research collaboration with chipmaker NVIDIA, marking one of (at least) eight AI deals Roche has signed since 2019.

Asia scenario

While the US and Europe remain leaders in AI drug discovery, the APAC region is rapidly catching up with the commoditisation of AI tools and resources.

"Countries in the APAC region, including China, Taiwan, Singapore, South Korea, and Japan, are emerging as key players in AI-driven drug discovery, due to substantial investments in research, strong academic institutions, and efforts to attract top talent. The region is making significant strides in areas such as drug repurposing (identifying new uses for existing drugs), drug asset management (licensing undervalued assets, redeveloping them with AI, and advancing them through the pipeline), and the development of novel AI algorithms like GenAI and Causal AI. Additionally, many governments in the region are providing significant funding and policy support to foster the growth of AI in healthcare, further fueling innovation and progress in the drug discovery space," said Dr Yu-Feng Wei, CEO, Vizuro LLC.

Sanjay Vyas, President and Managing Director, Parexel India observed that AI-driven drug discovery has become the mainstay in the APAC region. "Around 11 per cent of the total number of AI-driven drug development companies are in Asia. Leading the group in Asia is China and South Korea as per the Deep Pharma Intelligence report. Around 700 companies across Asia are using AI to decrease the failure rate of new chemical entities (NCE) during early development into final drug approval and commercialisation. AI has shown success in certain stages of NCE development and has been in use in late-stage clinical trials – site selection, patient identification, monitoring and retention," added Vyas.

According to a report by Deep Pharma Intelligence, an analysis of 92 companies in Asia developing AI-based drugs revealed key insights into the current landscape of drug development. Of the 152 reported drug candidates, 92 are at the discovery stage. Additionally, 10 drugs are in Phase II, and 16 are in Phase I. The majority of the drug candidates, 66 out of 152, are focused on various types of cancer, with the most common benign solid tumours, breast cancer, and prostate cancer. Another 17 candidates have undisclosed therapeutic areas, and 11 are aimed at treating neurodegenerative disorders, including amyotrophic lateral sclerosis and Parkinson's disease.

The report also highlights the leading countries in Asia developing AI-driven drugs. South Korea leads with 72 of the 152 drug candidates, of which four have reached Phase I of clinical trials. China follows with 53 drug candidates, including nine in Phase I, six in Phase II, and one in Phase III. Japan ranks third, with 12 drug candidates, all still in the discovery stage. Hong Kong and Singapore contribute smaller numbers, with 10 and 5 drug candidates under development, respectively.

"The APAC region, particularly China, India and Japan, is at the forefront of AI-driven drug discovery, with rapid advancements in machine learning, deep learning, and natural language processing shaping the future of pharmaceutical research. In China alone, over 100 AI pharmaceutical companies have emerged, supported by substantial investments exceeding $1.26 billion in 2021. This surge in innovation is facilitated by a supportive regulatory environment that encourages faster clinical trials and the integration of real-world data to assess treatment effectiveness. The growing investment in AI technologies, combined with strong academic and industry collaborations, is creating an ecosystem where innovation can thrive. With a supportive regulatory environment and a focus on real-world evidence, the region is poised to significantly impact global drug development, driving faster, more efficient solutions for unmet medical needs," said Vera Zheng, Senior Vice President, Asia Pacific Strategy and Head of Greater China, Parexel International.

Let's take a closer look at the efforts of these countries in advancing AI-based drug discovery.

Singapore

Singapore is bullish on becoming a biomedical powerhouse and the government has been actively pursuing the advancement of frontier technologies such as AI to support its biomedical science and healthcare ecosystems. As part of its Research, Innovation and Enterprise (RIE) 2025 plan, the government has invested over SGD 25 billion in science and technology research.

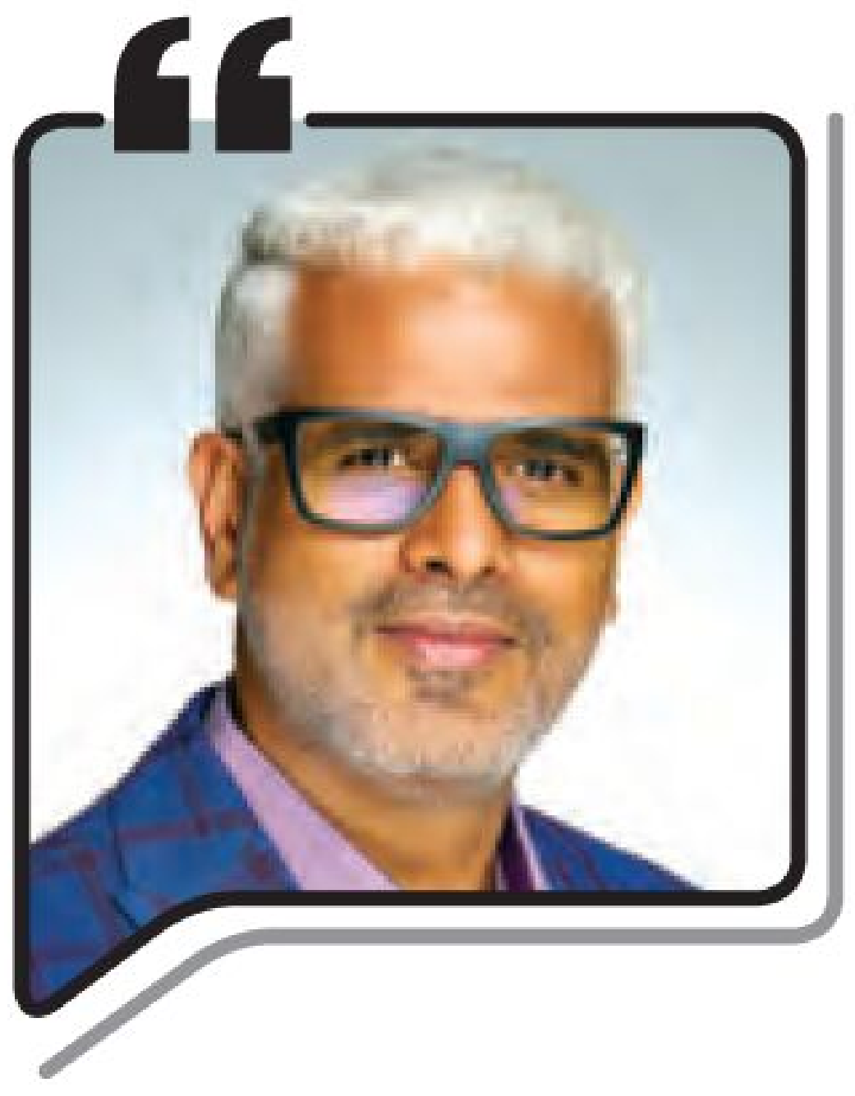
One of the initiatives is the launch of the Ignition AI accelerator. Through collaboration with Digital Industry Singapore (DISG), Ignition AI Accelerator aims to attract top international AI startups to Singapore, fostering a robust ecosystem for frontier technologies. In October 2024, the Ignition AI Accelerator announced a strategic partnership with Pfizer to transform its drug discovery and development processes through the integration of AI.

The Experimental Drug Development Centre (EDDC), Singapore's national platform for drug discovery and development, has inked several deals with AI-driven companies such as Partex and XtalPi. In the partnership with Partex, the focus is on leveraging AI-powered technologies such as target identification, molecule generation, and structure-activity relationship (SAR) optimisation to accelerate the development of novel therapeutics. Partex will bring its knowledge graph and small molecule screening library, while EDDC will contribute its extensive drug discovery expertise to drive clinical development. On the other hand, the XtalPi-EDDC collaboration, which expands on an earlier

> "Countries in the APAC region, including China, Taiwan, Singapore, South Korea, and Japan, are emerging as key players in AI-driven drug discovery, due to substantial investments in research, strong academic institutions, and efforts to attract top talent. The region is making significant strides in areas such as drug repurposing, drug asset management, and the development of novel AI algorithms like GenAI and Causal AI. Additionally, many governments in the region are providing significant funding and policy support to foster the growth of AI in healthcare, further fuelling innovation and progress in the drug discovery space."

- Dr Yu-Feng Wei,
CEO, Vizuro LLC

> "AI-driven drug discovery has become the mainstay in the APAC region. Around 11 per cent of the total number of AI-driven drug development companies are in Asia. Leading the group in Asia is China and South Korea (as per Deep Pharma Intelligence report). Around 700 companies across Asia are using AI to decrease the failure rate of new chemical entities (NCE) during early development into final drug approval and commercialisation. AI has shown success in certain stages of NCE development and has been in use in late-stage clinical trials – site selection, patient identification, monitoring and retention."



- Sanjay Vyas,
President and Managing Director,
Parexel India

> "In China alone, over 100 AI pharma companies have emerged, supported by substantial investments exceeding $1.26 billion in 2021. This surge in innovation is facilitated by a supportive regulatory environment that encourages faster clinical trials and the integration of real-world data to assess treatment effectiveness. The growing investment in AI technologies, combined with strong academic and industry collaborations, is creating an ecosystem where innovation can thrive. With a supportive regulatory environment and a focus on real-world evidence, the region is poised to significantly impact global drug development, driving faster, more efficient solutions for unmet medical needs."

- Vera Zheng,
Senior Vice President, Asia Pacific Strategy and Head of Greater China, Parexel International

Setbacks in AI-driven drug development

Despite the rapid progress of AI in drug discovery, not all has been smooth sailing. Several AI-developed drug candidates have encountered significant setbacks in 2023.

The UK-based biotech Exscientia announced in October 2023 the termination of its early clinical trial for the AI-driven cancer drug candidate EXS-21546. According to both clinical and preclinical data, the drug was unlikely to achieve an adequate therapeutic index. Consequently, the Phase 1/2 trial was halted, and further research on the target was discontinued.

Similarly, BenevolentAI, a London-based company, reported disappointing results for its AI-designed drug, BEN-2293, in April 2023 in a Phase 2a clinical trial for atopic dermatitis. The double-blind, placebo-controlled study showed the drug failed to outperform the placebo.

Japanese firms Sumitomo Pharma and Otsuka Pharmaceutical faced a setback when their AI-developed schizophrenia drug failed to outperform a placebo in two Phase 3 trials in July 2023.

partnership, aims to integrate automated synthesis solutions and large language models (LLMs) to enhance pharmaceutical research, particularly in targeted therapies. By combining AI, automation, and scientific expertise, both partnerships aim to streamline drug development, reduce time and costs, and expedite the conversion of scientific discoveries into viable drug candidates.

Apart from this, several startups have also mushroomed, of which, BluMaiden Biosciences has secured funding to advance small molecule drug discovery using AI-guided computational genetics and chemistry. Similarly, Engine Biosciences, focused on precision oncology, raised $27 million in a Series A extension, bringing its total to $86 million. Engine's platform decodes biological networks to identify genetic interactions, enabling the development of targeted therapeutics for cancers such as ovarian, colorectal, liver, lung, and prostate.

Australia

Australia is making significant strides in AI-driven drug discovery, with various platforms and collaborations accelerating the process. Researchers at Monash University have developed an AI tool called PSICHIC (PhySIcoCHemICal) to expedite drug discovery by using sequencing data to understand protein-molecule interactions, reducing reliance on costly traditional methods. Meanwhile, Commonwealth Scientific and Industrial Research Organisation (CSIRO) is working on new AI tools to fast-track drug discovery for emerging infectious diseases.

Algorae Pharmaceuticals has also made progress with its Algorae Operating System (AlgoraeOS) platform, finalising an initial catalogue of 24 drug targets. Developed in collaboration with University of New South Wales AI experts, these targets will undergo preclinical studies in an Australian pharmaceutical lab.

Several strategic partnerships further bolster Australia's AI-driven drug discovery landscape. The University of Sydney has signed an MoU with Pharos Therapeutics (the Australian arm of South Korea's Pharos iBio) to use AI in identifying compounds for cancer and rare disease treatments. The partnership grants access to Chemiverse, Pharos's proprietary AI platform, and provides the university with a top-tier research infrastructure.

Additionally, Queensland Institute of Medical Research (QIMR) Berghofer Medical Research

Institute has partnered with Syntekabio of South Korea to apply AI and high-performance computing in the development of new cancer and chronic inflammation treatments. Clinical-stage company PYC Therapeutics has also unveiled a collaboration with Google Cloud and other specialised partners to leverage AI for developing innovative medicinal drugs.

South Korea

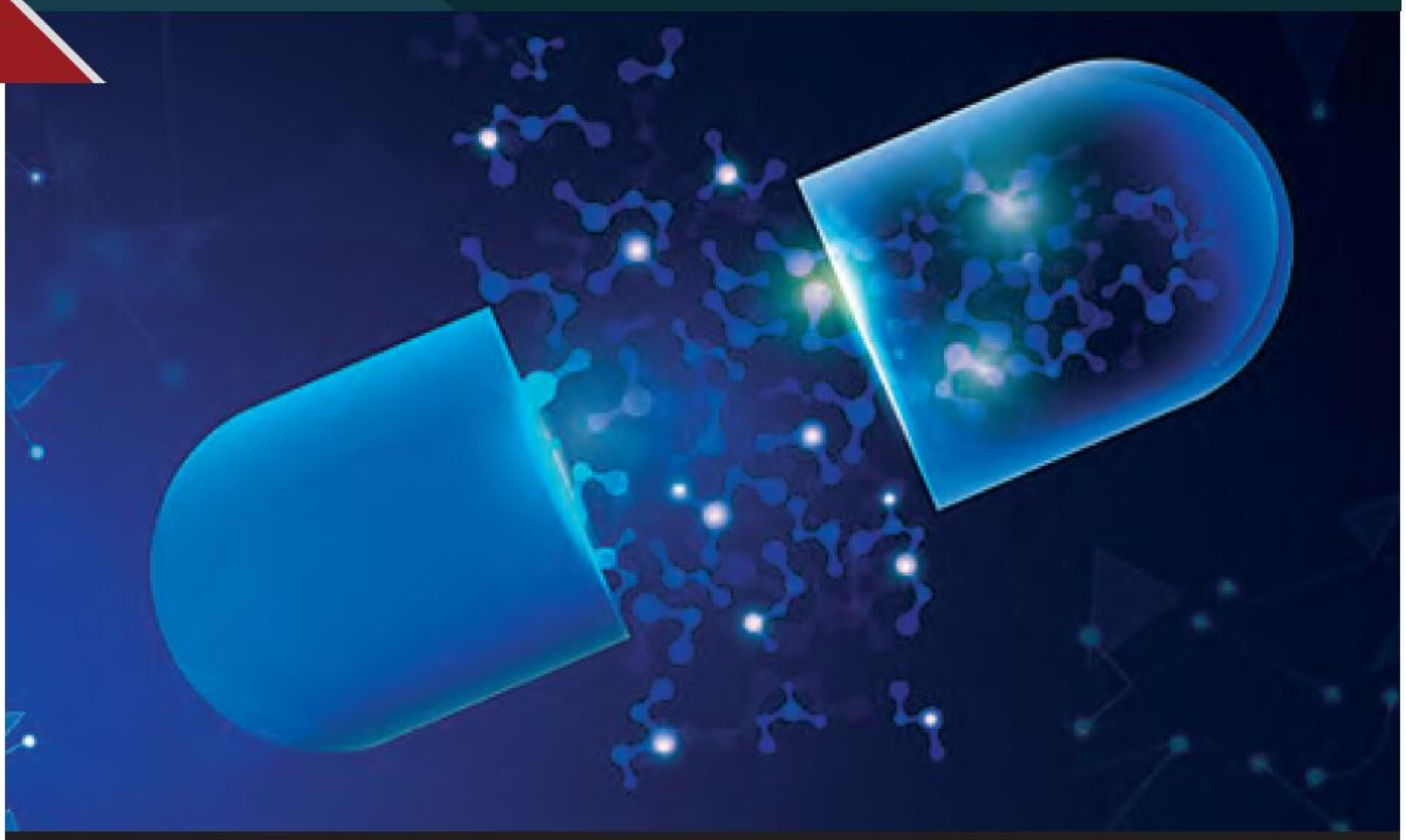
South Korea is taking significant strides in AI-driven drug discovery, launching the South Korea AI Roadmap, a five-year initiative to integrate AI into healthcare. The roadmap, extending through 2028, aims to strengthen AI R&D in healthcare and drug development while advancing medical data systems for safe applications. In November 2024, a consortium of South Korean research institutes was formed to leverage AI and national supercomputers in discovering novel drugs for lung cancer treatment.

Leading the charge in AI drug discovery are companies such as Syntekabio, Standigm, Pharos iBio, and Oncocross. Syntekabio uses its DeepMatcher platform, combining AI with genomic big data, to discover new drug candidates. The company is also conducting research on cancer drug screening, immune typing, pharmacogenomics, and multi-omics-based side-effect prediction, along with developing neoantigen prediction technologies for use with vaccines and cell therapies.

Pharos iBio has developed Chemiverse, an AI-based platform that supports the entire drug discovery process, from target identification to clinical development. Their first AI-driven drug is currently in clinical trials. Daewoong Pharmaceutical, another major player, has unveiled an AI-powered drug development system supported by an 800 million-compound database.

Standigm has built a workflow AI-driven drug discovery platform. With a global presence, it uses AI for novel target identification and compound design, generating First-in-Class compounds in as little as seven months. Its Standigm ASK and Standigm BEST platforms are fully automated, streamlining the entire drug discovery process.

Oncocross specialises in AI-driven drug discovery for in vitro and in vivo analysis. Oncocross has entered into a joint research agreement with JW Pharmaceutical to develop new drugs using its AI platform. The company recently completed a Phase 1 global clinical trial for OC514, a drug targeting sarcopenia and other rare muscle diseases.



Drug design on Supercomputers

Researchers in China are exploring the potential of next-generation computing technologies, including quantum computing, to revolutionise drug design, reduce development timelines, and lower costs.

A team of Chinese scientists has developed a model pipeline that integrates quantum computing with classical systems to address two critical challenges in drug discovery: computing reaction barriers and molecular dynamics simulations. Their approach, published in Scientific Reports, combines quantum-classical hybrid computing platforms and the ddCOSMO solvation model for solvation energy calculations. This hybrid method aims to accelerate the identification of promising drug candidates.

In December 2024, China established its first quantum computing and data medicine research institute to further explore the use of quantum computing in drug discovery. Another Chinese University Bengbu Medical University, in collaboration with Origin Quantum, is investigating quantum computing's role in accelerating small molecule drug development, leveraging China's third-generation superconducting quantum computer, Wukong.

Meanwhile, Insilico Medicine, in partnership with the Acceleration Consortium at the University of Toronto, has combined quantum computing with generative AI and classical computing methods to create molecules targeting the cancer-linked KRAS protein, previously deemed undruggable. This breakthrough demonstrates the powerful synergy between AI and quantum computing in advancing drug discovery, opening new possibilities for previously uncharted therapeutic targets.

Elsewhere, in Japan, D-Wave Quantum and Japan Tobacco's pharmaceutical division have partnered on a proof-of-concept project using quantum computing and AI to enhance small molecule drug development. The collaboration aims to accelerate the discovery of 'first-in-class' compounds, utilising D-Wave's quantum annealing technology to optimise AI training for drug design.

APAC leverages its advancements in computing power, regulatory flexibility, and large-scale data integration

Dr Isaac Bentwich,
Founder and CEO,
Quris-AI,
Israel

The Asia-Pacific (APAC) region has emerged as a significant force in AI-driven drug discovery, leveraging its robust research ecosystems, technological advancements, and strong government backing. Countries like China, Japan, South Korea, and Singapore continue to drive innovation by integrating AI into personalised healthcare and precision medicine. China accelerates AI adoption by combining clinical and genomic data at scale, enabling more tailored therapeutic discoveries. Japan advances precision medicine through breakthroughs in induced pluripotent stem cells (iPSCs), providing patient-specific models for disease research and drug development. South Korea enhances drug discovery with AI-based screening tools, and Singapore fosters partnerships between startups and pharma companies to refine precision-driven approaches to drug repurposing and optimisation. There is incredible potential for continued AI innovation in the drug development arena across the globe, and APAC will play a key role.

Comparison with Global Leaders

The United States is the clear leader in AI-driven drug discovery from a global perspective, but APAC countries are advancing rapidly. APAC stands out for its advancements in computing power, regulatory flexibility, and large-scale data integration. For example, China's vast datasets allow for large-scale AI model training, particularly in precision medicine, an area where stringent data privacy laws often restrict Western nations. By prioritising personalised treatments and high-throughput data analysis, APAC countries introduce unique strategies that complement global efforts and enrich the AI ecosystem in drug development.

Research Ecosystems and Industry Collaborations

The APAC region drives innovation through dynamic collaboration among academia, industry, and government. Japan's AMED and Singapore's Biopolis hub serve as excellent examples of coordinated efforts to streamline processes such as improving compound efficacy predictions and reducing toxicity risks. These partnerships actively integrate cutting-edge AI technologies with biological data to create platforms that advance precision medicine by addressing complex, individualised healthcare challenges. These efforts accelerate drug discovery while enhancing cross-border collaboration and innovation.

Fostering Innovation in AI-Powered Drug Discovery

APAC nations actively foster innovation by focusing on key enablers like multi-omics analysis, AI-driven chemical synthesis, and regulatory innovation. Regulatory agencies such as China's National Medical Products Administration (NMPA) and Japan's Pharmaceuticals and Medical Devices Agency (PMDA) lead efforts to adopt AI-integrated drug development, enabling more precise and efficient therapeutic pathways. Countries in the region also prioritise talent development through AI and bioinformatics education programmes, building a skilled workforce equipped to drive the next generation of breakthroughs in precision medicine and AI-driven drug discovery.

Opportunities for Growth

APAC economies are well positioned to further solidify their leadership by improving data-sharing frameworks to create richer datasets for AI systems. Expanding AI-specific regulatory pathways will also accelerate approvals for therapeutics developed with precision medicine approaches to help innovative treatments reach patients faster.

As the global appetite for the pharmaAI revolution increases, regions around the world will all need to play a part in the next era of safer, faster and more efficient drug development. BS

India

India too is catching up in utilising the technology for drug discovery. Key Indian startups, including Peptris Technologies, Sravathi AI Technology, Molecule AI, and Aurigene Pharmaceutical Services, are developing their platforms to augment drug development. Peptris Technologies, for instance, is leveraging AI to enhance the pre-clinical phase of drug discovery by integrating AI-driven chemical prediction algorithms and advanced machine learning models. By reducing both the cost and timeline of the pre-clinical phase, Peptris is aiming to make drug discovery more accessible and less financially prohibitive, which could lead to faster innovation in addressing unmet medical needs. Peptris Technologie claims their AI platform could reduce this phase from five years to just 1.5 years, and reduce the cost from $700 million to $400,000.

Sravathi AI Technology has developed a proprietary AI platform that can accurately predict chemical reactions, drug molecule properties, and formulation designs. Another startup Molecule AI has developed Molecule GEN, a built-in intelligence and heuristics that allow users of all skill levels and backgrounds, namely biologists, chemists, and AI researchers alike, to effectively translate their research ideas in no time and expedite the discovery of new therapeutic candidates. As a SaaS (software as a service) platform, Molecule GEN does away with the complex setup and maintenance processes and offers a frictionless way to use many built-in, tailor-made workflows for rational and AI-based de novo drug design. Aurigene Pharmaceutical Services, an arm of Dr. Reddy's Laboratories, has developed the Aurigene.AI platform, which combines predictive AI models, physics-based simulations, and computer-aided drug design (CADD) to assist in every step of the drug discovery process.

China

China has placed a significant emphasis on AI in the pharmaceutical industry under its ‘Made in China 2025’ plan, to become a global leader in advanced manufacturing, including AI technologies. The country leads the global AI landscape, housing over 60 per cent of big data experts across various sectors. Since 2018, over 100 AI startups have emerged in China’s healthcare space, responding to growing demand.

A notable success story from this region is Insilico Medicine, a Hong Kong-based startup pioneering AI-based drug discovery. Their lead drug, INS018-055, is the first AI-discovered drug, designed by generative AI, to enter Phase 2 clinical trials for idiopathic pulmonary fibrosis (IPF). Founded in 2014, when AI in drug discovery was still nascent, Insilico has made major strides, with its partnerships—including those with Janssen Pharmaceuticals—showcasing the increasing reliance on AI in the field. Insilico's approach involves using its AI target-discovery engine, PandaOmics, to process vast amounts of data, including omics, compounds, and clinical information, to discover new drug targets. This data is then used to design small molecule inhibitors through their Chemi platform. Additionally, the company's Pharma.ai suite, which includes tools like PandaOmics, Chemistry42, and inClinico, has helped accelerate the drug discovery process by predicting the success of clinical trial transitions.

Another key player, XtalPi Holdings, is transforming the biopharmaceutical industry by combining AI and robotics to improve drug development. The company integrates AI-driven dry lab algorithms with large-scale wet lab robotics, collaborating with major pharmaceutical firms like Eli Lilly & Janssen to enhance their drug discovery efforts.

In addition, global tech giants such as NVIDIA and Huawei are pushing the envelope in AI-driven drug discovery. NVIDIA BioNeMo, a generative AI platform, is accelerating drug development by providing customisable foundation models for pharmaceutical research. Huawei Cloud's Pangu Drug Molecule Model, co-developed with the Shanghai Institute of Materia Medica, has notably reduced the lead compound development cycle from years to just one month, showcasing significant improvements in drug design efficiency.

Japan

Japan has identified AI as a key technology in its drive to become a global leader in drug discovery. The Ministry of Economy, Trade, and Industry has launched initiatives to promote AI-based drug discovery. All the major pharmaceutical companies such as Takeda, Astellas, Chugai, Ono, and Daiichi Sankyo integrate AI into their research and development processes.

Astellas Pharma has made significant strides with its ‘Human-in-the-Loop’ drug discovery platform, which combines human input, AI, and

Leading AI drug discovery companies in Asia

S.No	Company	Details
1	BluMaiden Biosciences, Singapore	Leverages its MAIDENTM platform combining computational biology and chemistry to advance small molecule drug discovery
2	Engine Biosciences, Singapore	Leveraging machine learning and high-throughput biology to discover and develop precision oncology medicines
3	Algorae Pharmaceuticals, Australia	Undertaking AI enhanced drug discovery and development programmes to improve the wellbeing of people with serious diseases
4	Syntekabio, South Korea	Developed disease-agnostic synthetic drug candidate discovery AI platform
5	Standigm, South Korea	Built a workflow AI-driven drug discovery platform
6	Pharos iBio, South Korea	Developed Chemiverse, an AI-based platform that supports the entire drug discovery process
7	Oncocross, South Korea	Innovating the drug development process through its unique AI approach
8	Insilico Medicine, Hong Kong	Pioneer in AI based drug discovery. Only AI based company to reach phase 2 trial
9	XtalPi Holdings, China	Deveoped AI based drug disocvery platform
10	Peptris Technologies, India	Developing AI/ML based computational platform to accelerate the process of finding novel drugs ·
11	Sravathi AI, India	Focused on creating, discovering, and developing innovative advanced pharma and chemical products
12	Molecule AI, India	Developed Molecule GEN as a SaaS (software as a service) platform and AI-based de novo drug design.

robotics to accelerate the drug discovery process. This platform has successfully reduced the time from hit compound identification to drug candidate selection by approximately 70 per cent. The process revolves around a DMTA cycle: Design, Make, Test, and Analyse, enabling continuous improvements based on AI-driven insights. Chugai Pharmaceutical leverages AI for target exploration and molecule design, especially in therapeutic areas where the company is already a leader. In collaboration with Preferred Networks and other partners, Chugai is developing internal AI technologies using machine learning and deep learning to analyse massive datasets and create innovative drugs.

On the technological front, Mitsui and NVIDIA have teamed up to develop the Tokyo-1 supercomputer, the world's first generative AI supercomputer dedicated to pharmaceutical drug discovery. Set to launch later this year, the supercomputer will be available to Japan's pharmaceutical companies and startups, aiming to accelerate AI adoption in drug development. Major players such as Astellas, Daiichi Sankyo, and Ono Pharmaceutical are already planning to use Tokyo-1 in their AI-driven drug discovery projects.

Additionally, Fujitsu and the RIKEN Center for Computational Science have developed an AI-powered technology to predict structural changes of proteins from electron microscope images, generating 3D density maps using generative AI. This breakthrough promises to enhance understanding of protein behaviour and accelerate the development of novel therapeutics.

Immense potential

AI in drug discovery is not without its challenges. There is still a lack of regulatory clarity, and agencies are working to establish the best ways to govern and support the technology, not to mention concerns around data privacy. Moreover, sceptics are questioning the technology's potential in developing blockbuster drugs—pharma's Achilles' heel.

S&P analysts do not expect AI to produce more blockbuster drugs, but rather to shorten development timelines. According to a report from S&P Global, clinical development timelines with the use of this technology range from three to five years, compared to the typical seven to nine years without AI.

Nonetheless, AI has become a crucial tool in drug discovery, and Asia is leading the charge in this transformation. As AI technologies continue to evolve, they have immense potential for breakthroughs in cancer, neurological disorders, and beyond. BS

Ayesha Siddiqui

Accelerating Cancer Treatment with Precision Medicine & NGS

Asia accounts for nearly half of global cancer cases, making it a major health concern. Recognising the promise of precision oncology, governments across the region have initiated efforts to drive advancements in this space. Let's take a closer look at the progress being made in precision oncology in the Asia Pacific region.

Cancer is inherently diverse, with significant variations both between different tumours and among individuals. This variability extends across the globe, with certain cancers—such as head and neck cancers—being more common in Southeast and East Asia than in Western countries.

A study published in The Lancet reveals differences in lung cancer between Caucasian and Asian populations. These disparities extend across various factors, including epidemiology, genomics, standard therapies, and outcomes, all influenced by geographic and ethnic variations. Such differences play a key role in determining the most effective treatment for patients.

Understanding the genetic underpinnings of cancer is vital for advancing precision oncology, which tailors treatments based on an individual's genetic makeup. Beyond improving patient outcomes, genomic profiling has the potential to save healthcare systems billions by eliminating ineffective treatments, making healthcare more affordable and sustainable. An Australian study underscores these benefits, demonstrating how this approach can significantly reduce unnecessary prescriptions and lower healthcare costs.

Many countries have therefore launched initiatives to explore and understand the genetic foundations of cancer, aiming to revolutionise how we treat this dreaded disease.

Leading among them, Singapore has launched a 10-year national precision medicine research roadmap to accelerate biomedical research, improve health outcomes, and create economic opportunities across various sectors. As part of this initiative, two multi-institutional and multidisciplinary teams of clinician-scientists and researchers have each been awarded S$25 million in grants by the Singapore Ministry of Health through the National Medical Research Council (NMRC) Office and MOH Holdings Pte Ltd, under the NMRC Open Fund-Large Collaborative Grant (OF-LCG) programme. The S$50 million in total funding supports the SYMPHONY 2.0 and Colo-SCRIPT research programmes, which aim to advance precision oncology research in Singapore, focusing on improving the understanding, diagnosis, and treatment of lymphoma and colorectal cancer.

Australia is also very active in driving the precision medicine movement. The Australian Genomic Cancer Medicine Program (AGCMP) focuses on improving health outcomes for patients with less common, high-mortality cancers, including ovarian, and pancreatic cancer, sarcomas and cancer metastasis. Australia also launched the Precision Oncology Screening Platform Enabling Clinical Trials (PrOSPeCT), which will sequence the genomes of more than 20,000 cancer patients, many with rare and challenging tumours. The $185 million AUD (about $127 million) project will unite Australian federal and state governments, hospitals, research organisations, and biopharma companies to direct patients to targeted therapies and clinical trials and advance promising new treatments.

The government in South Korea-led K-MASTER project created a comprehensive database of genomic data from 10,000 cancer patients. This resource supports healthcare professionals in cancer diagnosis and treatment.

Similarly the government in Thailand has established the Genomics Thailand Initiative, a collaborative research network designed to advance precision medicine in the country.

In Japan, the National Cancer Center Japan (NCC), Precision Medicine Asia (PREMIA), and Paradigm Health Inc. have launched the LC-SCRUM-CD (Lung Cancer Genome Screening Project for Individualised Medicine-Clinical Development). This nationwide clinical trial network, which includes over 150 hospitals through the LC-SCRUM-Asia initiative, aims to advance precision medicine for cancer patients by leveraging cancer genomic screening.

The Taiwan Precision Medicine Initiative (TPMI) seeks to gather genetic data from around one million individuals to develop a risk assessment model for common diseases including cancer.

Meanwhile, in India, the GenomeIndia Project, aims to sequence 10,000 genomes from healthy individuals across the country. This initiative seeks to create a comprehensive genomic database to support personalised healthcare solutions.

Collaborative forces driving precision medicine

To promote cancer prevention globally and to provide evidence-based recommendations through the development of Regional Codes Against Cancer, the International Agency for Research on Cancer (IARC/WHO) and its partners launched the World Code Against Cancer Framework in 2022. As part of its consolidation of priorities to address gaps in cancer control in 2021, the Asian National Cancer Centers Alliance (ANCCA) recognised the importance of developing a set of cancer prevention recommendations for Asia.

Members of the ANCCA are working towards creating an Asian Code Against Cancer (ACAC). The goal is to develop a comprehensive code with sub-chapters that address the diverse populations across Asia, following the rigorous scientific review process outlined in the IARC/WHO World Code Against Cancer Framework.

Several cross-country projects are advancing cancer research in Asia. One such initiative is the A-TRAIN project, launched by the National Cancer Center Hospital Japan. This international study, involving eight Asian countries (Japan, Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand, and Vietnam), aims to develop novel treatments based on genomic abnormalities for cancers common in Asia. The project focuses on cervical cancer, ovarian cancer, nasopharyngeal carcinoma, endometrial cancer, and breast cancer. It will build and analyse a comprehensive database by examining genomic abnormalities through liquid biopsy, alongside clinical information such as treatment details and patient prognosis.

The other one, the Quad Cancer Moonshot is a groundbreaking collaboration between the United States, Australia, India, and Japan. The initiative aims to combat cancer, starting with cervical cancer—a largely preventable but still major health issue in the Indo-Pacific region. The Moonshot will lay the groundwork for addressing other forms of cancer by strengthening the region's cancer care ecosystem, improving health infrastructure, expanding research collaborations, building data systems, and enhancing support for cancer prevention, detection, treatment, and care.

In addition to these government-led efforts, industry-academic collaborations are also advancing precision oncology. The University of Melbourne has teamed up with global biomedical company Illumina to integrate next-generation sequencing (NGS) technology with research expertise, aiming to move genomics from the lab into routine clinical care. Furthermore, the university has signed a memorandum of understanding (MoU) with the Peter MacCallum Cancer Centre to establish a new center dedicated to transforming how genomics and precision oncology are delivered in Australia.

Developing Asian specific solutions

Molecular diagnostic assays are essential for personalised care, serving as the first step in treatment planning. However, many of these tests are based on biomarkers and genetic data derived from Western populations, creating a gap in addressing the unique genetics of the Asian population.

To improve access to affordable, advanced genomic testing for cancer in Singapore, Thermo Fisher Scientific, the National University Hospital (NUH), and Mirxes, a Singapore-based RNA technology company, have signed a MoU. This collaboration aims to develop and clinically validate NGS solutions and cancer research tailored to the unique needs of the Southeast Asian population.

Gencurix, a Korean company, has developed GenesWellBCT, Asia's first prognostic diagnostic test for breast cancer. Unlike most Western tests, which conduct clinical trials in Western countries, GenesWellBCT has been validated through multiple trials focused on Asian patients. This test is the first of its kind in Asia to receive national government approval, and Gencurix plans to expand into the Japanese market based on these positive results. Several other companies are also developing diagnostic tests specifically for the South Asian population.

As research in genomics and personalised medicine advances, we continue to unravel the complexities of this elusive disease and will be able to treat cancer just like any other illness. BS

Ayesha Siddiqui

Malaysia Turns Key Med Tourism Hub

Malaysia is emerging as a prominent medical tourism hub, with the sector generating revenue of $444 million (RM 2 billion) in 2023. A combination of factors is driving this growth such as including strong government support and strategic private-sector partnerships. Let's explore further.

Malaysia is emerging as a leading hotspot for medical tourism alongside India, Thailand, Singapore, and South Korea. Over the past decade, revenue from medical tourism in Malaysia has grown significantly, increasing from approximately RM572 million ($128 million) in 2011 to nearly RM 2 billion ($444 million) in 2023, according to the RHB Investment Bank Bhd medical tourism report.

In 2023, approximately 1.08 million people travelled to Malaysia for medical and healthcare purposes. Indonesia remains the largest source market for Malaysia's medical tourism, with patients from the neighbouring country accounting for 64.9 per cent of the total medical tourists. The top five countries contributing to healthcare travel in Malaysia are Indonesia, China, India, the United Kingdom, and Japan. Malaysia is widely recognised as a premier destination for the 'Big Three' specialties: oncology, cardiology, and neurology/pain management, according to a report from Alvarez & Marsal (A&M), a consulting firm.

A majority of medical tourists come to Malaysia for health screening. The share of medical tourists who seek high-value treatments in streams such as cardiology, oncology, neurology, gastroenterology and orthopaedics make up less than 30 per cent of tourists.

With Malaysia being known as a cost-competitive healthcare destination, players that invest in deepening key specialties and equipment sophistication are well-placed to capture some of the demand for high-complexity treatments from countries such as Singapore. For instance, the price of a knee replacement procedure in Malaysia is $7,000–8,000 compared to $15,500–16,500 in Singapore. An MRI scan would cost $350–400 in Malaysia, as compared to $500–570 in Indonesia and over $1,200 in Singapore, according to Alvarez & Marsal (A&M) report.

Over the next few years, top healthcare groups in the country are planning to advance their offerings in high-value treatments, paediatrics and robotic services to tap foreign demand. For example, Sunway Medical Group intends to strengthen its quaternary services in kidney transplant, paediatric heart surgery and bone marrow transplant, while KPJ Healthcare is targeting more surgical referrals from neighbouring countries.

Catalysts for Change

Medical tourism is an important aspect of Malaysia's economy, and the government has actively promoted it through various partnerships and initiatives. One notable effort is the establishment of the Malaysia Healthcare Travel Council (MHTC) in 2009 under the Ministry of Health. This agency is responsible for promoting and facilitating the growth of the country's medical tourism industry.

To further enhance the industry, the government introduced the Flagship Medical Tourism Hospital Programme (FMTH), a cornerstone of the Malaysia Healthcare Travel Industry Blueprint 2021-2025. This initiative aims to position Malaysia as a global leader in medical tourism by fostering innovation, improving healthcare standards, and attracting international patients. The FMTH Programme aspires to establish Malaysia as a premier medical tourism destination, leveraging the country's advanced healthcare infrastructure, expert medical professionals, and renowned hospitality to attract international patients seeking high-quality medical services at competitive prices. The FMTH Programme epitomises Malaysia's commitment to delivering exceptional end-to-end patient experiences, grounded in outcome-based medical excellence, best practices in service delivery, and robust international branding.

MHTC is also targeting travellers from nations

Leading players in medical tourism in Malaysia

- KPJ Healthcare Berhad,
- Dentalpro Group,
- Island Hospital,
- Mahkota Medical Centre,
- Prince Court Medical Centre,
- IJN Health Institute,
- Sunway Medical Centre,
- Tropicana Medical Centre,
- Pantai Holdings Berhad,
- LohGuanLye Specialists Centre

Country of origin of travellers to Malaysia

- Indonesia
- China
- India
- Japan
- US
- UK

Top treatments for medical tourism

- Health screenings
- Oncology
- Cardiology
- Neurology/pain management

Source: Market Research Future

such as the Maldives, the Middle East, China, and India. It has established a representative office in Hangzhou, China, and entered into multiple agreements with Chinese medical institutions to facilitate access for mainland residents seeking healthcare services in Malaysia. The country has also extended visa-free travel arrangements for tourists from China and India.

Most key private hospitals in Malaysia have established representative offices in key medical tourist source locations to facilitate patient outreach and strengthen brand presence. Currently, a majority of these offices are located in Tier 1 or Tier 2 cities in Indonesia, with a limited number of representative offices in Indochina, the Chinese mainland and other markets. Sunway Medical Group has the most comprehensive representative office coverage in Indonesia, serving all top medical tourist source locations. Other players such as the Mahkota Medical Centre and KPJ also work with partner agents for patient referrals and to facilitate travel arrangements, says Alvarez & Marsal (A&M) report.

Focus on Investments & Acquisitions

Malaysia continues to prioritise partnerships as a key strategy to strengthen its position in the highly competitive medical tourism industry. In February 2024, KPJ Healthcare, which manages 29 hospitals across the country, announced that two of its hospitals had joined the Mayo Clinic Care Network. This collaboration is expected to elevate the quality of healthcare services provided by these hospitals, leveraging Mayo Clinic's extensive knowledge and expertise. The partnership aims to attract patients seeking advanced medical treatments, thereby boosting demand for healthcare services and medical products. As part of the collaboration, the hospitals will incorporate digital health tools and utilise Mayo Clinic's comprehensive point-of-care database, which provides valuable clinical information on various medical conditions. Additionally, physicians will have access to live video consultations with their peers in the Mayo Clinic network, enabling improved case discussions and patient care. This development follows another significant partnership established in January 2024 between Sunway Healthcare Group, a leading private healthcare provider in Malaysia, and PT JCB International Indonesia, a subsidiary of JCB International. This collaboration seeks to attract medical tourists from Indonesia by offering tailored wellness packages and other value-added services at Sunway Medical Centre in Kuala Lumpur.

2024 also witnessed the largest acquisitions in this sector. In September, IHH Healthcare announced its acquisition of Island Hospital from Affinity Equity Partners for RM3.92 billion (nearly $900 million) in cash. This move aligns with IHH's growth plans in Malaysia, particularly in Penang, a major medical tourism hub.

Malaysia has significantly enhanced its share of the medical tourism market, with its main competitors being Thailand and Singapore. Thailand, in particular, has implemented various measures, such as relaxed medical visas, to attract more patients. Nevertheless, Malaysia will remain an attractive option, and the market is expected to be worth $7.54 billion by 2034.

As the global demand for medical tourism continues to grow, Malaysia's strategic investments and initiatives are poised to secure its position as a leading destination for medical tourists in the coming years.

Ayesha Siddiqui

“China and Asia are already the global leaders of Antibody-drug conjugates”

Chime Biologics, based in Asia, has positioned itself as a global leader in the Contract Development and Manufacturing Organisation (CDMO) sector. Known for its innovation, the company introduced the world’s first modular biopharmaceutical plant, KUBio, to support the entire biologics development process—from cell line creation to commercial manufacturing. Leveraging advanced technology from its Shanghai Innovation Center and a proven track record in IND-enabling through BLA filing at its Wuhan facility, Chime Biologics offers a comprehensive, one-stop solution for CMC (chemistry, manufacturing, and controls) services worldwide. In an interaction with BioSpectrum, Dr Jimmy Wei, President of Chime Biologics, shared insights into the company’s rapid growth, trends in the CDMO industry, the rising prominence of Antibody-drug conjugates (ADCs) and Asia's growing role in global biomanufacturing. ***Edited excerpts;***

Dr Jimmy Wei,
President,
Chime Biologics

Chime Biologics has a vision to make biologics more accessible and affordable. How does this vision drive your day-to-day operations and long-term strategies?

We are committed to being a global CDMO with industry-leading capabilities and efficiency, focusing on operational excellence and cost reduction. This vision drives our one-centre strategy, which centralises all operations at our single operational centre unlike multiple facilities favoured by some competitors. With this strategy, we ensure streamlined processes and minimal duplication, significantly reducing the costs of manufacturing while maintaining high quality. For example, as we expand our manufacturing capacity from 10,000L to 30,000L by 2025—a threefold increase—we are only increasing our workforce by 50 per cent.

What are the key factors behind your rapid growth and success in the CDMO sector?

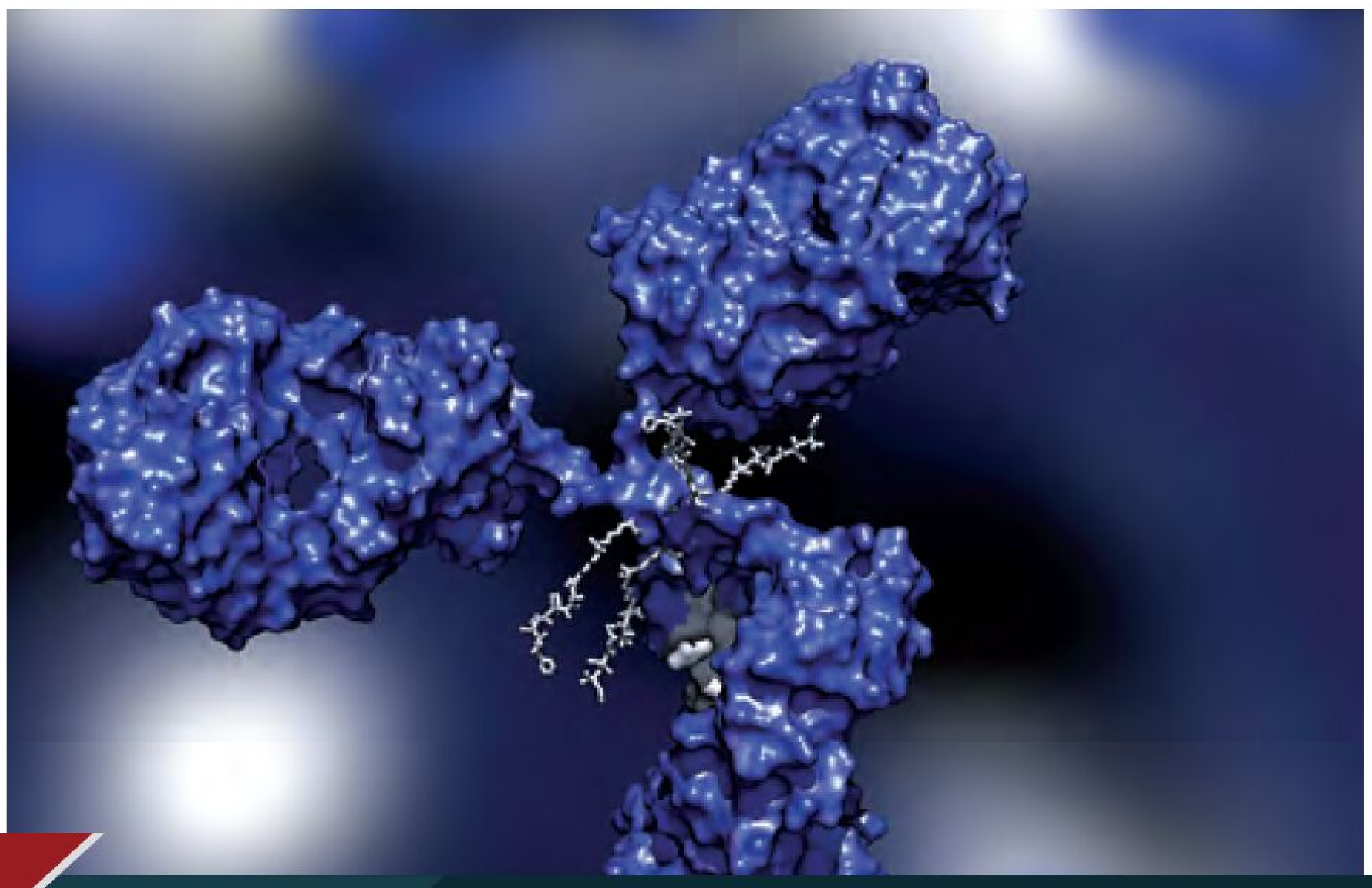
Our facility complies with US Food and Drug Administration (FDA), European Medicines Agency (EMA), and National Medical Products Administration (NMPA) standards, positioning us as one of the most capable CDMOs globally. Compliance in these key markets enables us to serve a diverse, international clientele, reflected in our fully booked 10,000L capacity for the next 12 months.

What truly differentiates Chime Biologics is our team. Our senior leadership comprises professionals with extensive global experience, having worked across the U.S., Canada, and Singapore. English serves as our primary language of communication, ensuring more seamless collaboration. Beyond the leadership, our mid-level directors bring an average of almost ten years of hands-on industry expertise, giving us a competitive edge in navigating complex regulatory landscapes and delivering tailored solutions.

This depth of experience is a key differentiator, particularly in Asia, where many competitors are relatively young. Our team's collective expertise, coupled with our state-of-the-art facilities, enables us to consistently deliver high-quality, efficient solutions to our clients worldwide, underscoring our commitment to excellence and innovation.

What trends are shaping your business, and how is Chime Biologics adapting to them?

Small and medium-sized pharmaceutical companies face a very challenging environment to access capital and markets. Our clients too are



> ***China and Asia are already the global leaders of ADCs. China is one of the few countries globally with all the infrastructure for ADC development which is very complex. It requires the enriched experience of large molecules, small molecules, and conjugation technology. Japan has strong R&D capabilities in biopharmaceuticals. Nevertheless, in recent years, Japan has been less agile in adopting certain emerging technologies compared to China. Since ADC development is relatively more expensive but much slower in other countries. China has emerged as a key player in the last few years.***

facing tremendous pressure to optimise their costs and find the most affordable CDMO solution. This trend is especially pronounced in Europe and parts of Asia and is likely to persist in 2025 and the coming years.

To enable our clients to advance their pipeline to the next level, we've developed a highly flexible business model tailored to their diverse needs with upfront milestone-based payments linking the success of these clients to our CDMO service, which sets us apart from the traditional fee-for-service model. By aligning our success with the clients, we provide a more collaborative approach that helps them achieve an optimal balance between quality, cost, and efficiency.

ADCs are becoming increasingly important in healthcare. How is Chime Biologics positioning itself to address global demand? How can China and Asia position themselves as global leaders in this area?

China and Asia are already the global leaders of ADCs. China is one of the few countries globally with all the infrastructure for ADC development which is very complex. It requires the enriched experience of large molecules, small molecules, and conjugation technology.

Japan has strong R&D capabilities in biopharmaceuticals. Nevertheless, in recent years, Japan has been less agile in adopting certain emerging technologies compared to China. Since ADC development is relatively more expensive but much slower in other countries. China has emerged as a key player in the last few years. I think probably 80-90 per cent of ADC investments globally have some ties to China.

We also decided to enter the ADC space but with a differentiated and integrated offering. Firstly, we are building a very strong, dedicated ADC team with a lot of experience. Secondly, we established partnerships in this space. For example, we entered into a strategic partnership with Waterstone Pharmaceuticals to supply linker-payload to cover small molecules. We also established partnerships with ADC conjugation and ADC drug product manufacturers.

Although we have many partners, we still control and manage the quality, and are responsible for the quality of the overall drug development. Through our open platform, we differentiate ourselves from other ADC CDMOs by offering clients diverse technologies, including antibodies, linkers technologies, and payloads. Clients could choose what works best based on the clinical and regulatory needs, while our team of in-house and external experts will advise.

This is of great value since ADC conjugation is the key issue when it comes to development with a global scarcity of talent with frontline development and CMC experience. Manufacturing is less of a bottleneck since ADCs require smaller batch 200L for manufacturing when compared to antibody manufacturing which may require 2,000L facilities.

How does Chime Biologics plan to navigate regulatory hurdles, especially with evolving global compliance standards like FDA and EMA expectations?

FDA, EMA, and NMPA guidelines and standards are always evolving. We have to keep an eye on all these new trends to ensure compliance with these standards. We established a dedicated team in-house to watch what's going on with these regulatory developments and invite the former FDA auditors, EMA auditors to regularly come to our site. This is one area where we invest the most.

What will be the biggest issue in the biotech industry in 2025 and why?

Geopolitical development is the number one issue. The second issue, in my opinion, is access to financing. A constant challenge for regulators and the industry worldwide is to ensure that every drug produced is safe, stable, and reproducible. A science and technology-based approach will never go out of style as we work with biotech companies to help innovative therapies reach the market more swiftly. BS

Ayesha Siddiqui

"There is a need for pharmaceutical companies to build HCP relationships, backed by scientific credibility"

Docquity, headquartered in Singapore, is Southeast Asia's largest professional network for verified healthcare professionals (HCPs), connecting over 410,000 doctors across the region. The platform enables HCPs to share clinical experiences, and engage in secure, peer-to-peer discussions. Docquity uses AI/ML to provide insights into HCP preferences, shaping personalised healthcare engagement strategies for enterprises. In an interview with BioSpectrum, Amit Vithal, Co-founder and Chief of Growth, Docquity discusses key trends in digital health across Asia, Docquity's expansion into government healthcare initiatives, how the company's data-driven approach is transforming healthcare engagement and shaping future B2G collaborations across Asia. ***Edited excerpts;***

«

Amit Vithal,
Co-founder and
Chief of Growth,
Docquity,
Singapore

Tell us about how Docquity has influenced the healthcare landscape in Southeast Asia and how the company's data-driven approach differentiates it in the market?

As Southeast Asia's largest network of over 410,000 verified HCPs, Docquity gains profound insight into HCP needs and preferences, which we leverage to strengthen healthcare knowledge and interactions.

Guided by our vision to connect HCPs to build healthier lives around the world at scale, our platform and services empower our users, HCPs, to learn, connect, and grow across many use cases. For example, our comprehensive educational resources have delivered over 6 million Continuing Medical Education (CME) credits to doctors till date, reaching even those serving in remote communities. We're also fostering collaboration among HCPs to address complex health challenges in the region. Our platform allows them to easily consult their peers on unique cases, equipping them to provide more effective patient diagnoses and care.

In turn, our deep and growing understanding of HCPs allows our healthcare enterprise clients to better understand, engage with, and educate our users. We've thus securely leveraged the power of data to develop our Insights practice. By combining our in-depth network insights with advanced Artificial Intelligence (AI) and machine learning (ML), we help our clients create relevant and meaningful interactions with their target audiences. Ultimately, it's about building connections that lead to better healthcare decisions and outcomes.

What are some key trends you're seeing in healthcare and digital health across Asia? How does Docquity leverage these trends to stay ahead and continuously offer value to HCPs and healthcare enterprises?

The Docquity Pulse Check report is an industry resource we publish annually based on insights from hundreds of doctors within our platform and beyond. The goal is to outline pivotal trends shaping healthcare in Southeast Asia.

This year's report reveals a clear trend: doctors continue to embrace digitisation to support more efficient patient management and knowledge building. For example, clinics are increasingly adopting digital tools like messaging apps and electronic medical records (EMRs) to streamline operations, with more than half of the doctors surveyed (59 per cent) using digital platforms for consultations. The majority (81.5 per cent) have embraced a mix of digital and in-person learning events, and many doctors value on-demand content and medical apps for their convenience.

Our study also highlights the need for pharmaceutical companies to build HCP relationships, backed by scientific credibility. 86.7 per cent of doctors value their connections with pharmaceutical representatives, and most of them

Doctors continue to embrace digitisation to support more efficient patient management and knowledge building, according to this year's Docquity Pulse Check report. For example, clinics are increasingly adopting digital tools like messaging apps and electronic medical records (EMRs) to streamline operations, with more than half of the doctors surveyed (59%) using digital platforms for consultations. The majority (81.5%) have embraced a mix of digital and in-person learning events, and many doctors value on-demand content and medical apps for their convenience.

prioritise scientific research (over opinion) when learning about products (72.1 per cent) and making prescription decisions (83.7 per cent).

At Docquity, we're determined to stay ahead of these trends and provide healthcare professionals and enterprises with the resources they need to thrive in today's digital era. Docquity offers doctors an extensive range of resources, including on-demand scientific content, continuous learning opportunities, interactive webinars and events, and peer discussions, for their long-term medical education and growth, amidst their busy schedules. For our healthcare enterprise clients such as pharmaceutical companies, our Awareness to Advocacy (A2A) Program securely harnesses our in-depth network insights to deliver scientifically credible and personalised content to their target HCPs across omnichannel touchpoints, ensuring optimised campaigns that also transform patient care for the better.

Docquity recently partnered with Sumedang Regency in West Java to launch the Puskesmas AI platform. Could you share more on the role you envision for Docquity within government healthcare initiatives and any plans to expand B2G partnerships across Asia?

Docquity's collaboration with the Sumedang Regency exemplifies our dedication to addressing critical public health challenges through advanced technologies. The Puskesmas AI platform equips HCPs in Sumedang, West Java with GenAI-powered resources to address critical health issues such as tuberculosis, stunting, and hypertension. Fully compliant with Indonesian and European data protection regulations, this platform provides HCPs with knowledge based on data from the Ministry of Health, top scientific journals, the World Health Organization (WHO), and other credible government sources. The Puskesmas AI platform aims to provide real-time, comprehensive support for HCPs, enabling them to make more informed decisions and improve patient outcomes in these critical areas for the region.

Docquity continues to explore initiatives aligned with our mission of empowering HCPs with the tools needed for better care across communities in Southeast Asia and beyond.

With Docquity's focus on personalised interactions through AI and ML, what unique insights are you gathering about HCP preferences and needs? How are these insights shaping healthcare engagement strategies?

As HCPs increasingly adopt a blend of digital tools with traditional approaches, healthcare enterprises face a critical need for nuanced insights into their evolving preferences to implement effective engagement strategies. To serve this growing market, we created Docquity Insights, securely built on years of HCP engagement data from the Docquity platform. It empowers healthcare enterprises with actionable intelligence to deliver the right message, to the right HCPs, and through the right channel, to achieve tangible results. At the same time, HCPs are met with content that is most relevant to them, for their better learning and decision-making.

For example, working with Docquity enabled Menarini Malaysia to double its HCP outreach in a campaign educating doctors about multimodal approaches to post-surgery pain management. In Thailand, Laboratorio Farmaceutico SIT engaged Docquity to raise awareness among general practitioners (GPs) and pediatricians on probiotics' role in gastrointestinal health, which led to greater HCP awareness and a 31 per cent increase in sales – double the market growth rate. Similarly, in Indonesia, Green Nature Farm (GNF) partnered with Docquity to connect with pediatricians and GPs on essential nutrients for children's development, reaching 20 per cent of its ambitious outreach target within just one month. By integrating our vast HCP network and insights with robust omnichannel strategies, Docquity enables healthcare enterprises to build stronger connections with HCPs, enhancing outcomes for all healthcare stakeholders. BS

Ayesha Siddiqui

“There remains a high unmet need for new & alternative treatment options for prurigo nodularis & atopic dermatitis”

Asia-Pacific region houses some of Galderma’s fastest growing markets, where sales have fueled a strong performance. There have been multiple successes in the region in 2024 for the Swiss pharmaceutical firm, with a number of important product launches, such as Restylane VOLYME in China, Restylane EYELIGHT in Korea and Alastin in Australia. More recently, Relfydess (RelabotulinumtoxinA) was approved in Australia and Sculptra - which celebrated its 25th launch anniversary this year - was approved in China. Gerry Muhle, Galderma’s Head of Global Product Strategy, spoke to BioSpectrum Asia in detail about the company’s growth plans in 2025 and beyond. ***Edited excerpts:***

«

Gerry Muhle,
Head of Global
Product Strategy,
Galderma,
Switzerland

What major plans are in store for the company (Asia Pacific region & global) in 2025?

We’re going to keep delivering on our unique Integrated Dermatology Strategy, to continue our strong growth trajectory in 2025. This will be driven by our high-performing commercial execution, and building momentum behind our brands, with many exciting milestones in terms of key regulatory approvals and new, innovative products. In the Asia-Pacific region specifically, the compelling dermatology market remains on a consistent growth trajectory, with robust demand for premium, science-based products. Galderma is well positioned to capitalise on growing consumer demand into next year and beyond.

Are you planning to launch new products in 2025, particularly in the Asia Pacific region?

Absolutely. From an aesthetic standpoint, we’re planning to launch multiple products this year, including Sculptra and Alastin in China, as well as Relfydess in Australia.

Are there any specific skin diseases/ conditions that Galderma is targeting through its products?

From a therapeutic dermatology perspective, we currently have marketing authorisation applications under review by multiple regulatory authorities (including in Asia-Pacific countries such as South Korea, as well as Australia and Singapore via the Access Consortium framework), for a monoclonal antibody - nemolizumab - in both prurigo nodularis and atopic dermatitis. Atopic dermatitis is a very common disease, with symptoms such as persistent itch and recurrent skin lesions. Prurigo nodularis is a serious skin disease characterised by chronic itch, which can cause poor sleep quality, and skin nodules covering large body areas. Given these high-burden symptoms, which can also have an impact on mental health, there remains a high unmet need for new and alternative treatment options for both of these conditions.

Which Asian countries are generating maximum business for the company? And why?

Galderma is a category leader in India, where we have been delivering above-market growth, particularly in Dermatological Skincare, driven by several key trends such as rising middle-class disposable income; growing consumer awareness, and increasing influence of social media platforms and the rapid growth of e-commerce channels in shaping demand. In China too, Cetaphil has been performing extremely well, fueled by our highly effective e-commerce strategy. We also continue to deliver strong performance in China, where the growth of the aesthetics medicine market has outpaced the global market in the past decade. Overall, Injectable Aesthetics has seen strong growth across the region, supported by the successful Sculptra launch in Thailand earlier this year and strong demand across key markets.

Galderma also benefits from a well-established presence in Singapore, which is not only a key market for Galderma's innovative portfolio of cutting-edge brands and services, but also serves as its Asia-Pacific regional hub.

How is Galderma exploring the use of new-age technologies such as AI, robotics, etc. for product development, manufacturing, and marketing?

New technologies geared towards offering greater precision and experimentation across products and treatments are primed to reinvent the future. At Galderma, we've been expanding our range of solutions in this area.

FACE by Galderma is an innovative solution powered by augmented reality, that allows patients and their physicians to visualise potential aesthetic treatment results at the planning stage. Trained with datasets that include over 20,000 individuals from a wide range of ethnic backgrounds, the app gives patients real-time, realistic "before and after" views of possible results from an individualised treatment plan by leveraging AI deep-learning technology.

In Dermatological Skincare, Galderma's Cetaphil has also leveraged technology with its 'MySkin by Cetaphil' tool, which launched last year. Its state-of-the-art technology compares each selfie to a database of 70,000 diverse skin images to create an inclusive, personalised report revealing skin type, skin concerns and proneness to various skin conditions.

We know that as the dermatology technology field advances, more resources will be available to empower people to achieve their goals and feel their best. That prospect directly reflects our common purpose at Galderma of advancing dermatology for every skin story.

What are the key trends and challenges shaping the dermatology & aesthetics market? What is the future of aesthetics?

Dermatology is the fastest growing self-care segment, fueled by a rising middle class; increasing consumer awareness of skin health; a growing focus on preventive care; and broader acceptance of aesthetic treatments. Zooming further on aesthetics, Galderma delivers a world-renowned Injectable Aesthetics portfolio because we have the unique ability to rapidly respond to our community. We work closely with healthcare professionals to stay on top of the latest trends, so we're able to keep expanding the capabilities of our products using the latest scientific advances to deliver solutions that patients and healthcare professionals need.

We developed a groundbreaking report 'NEXT by Galderma' based on a year's worth of comprehensive trend-forecasting research conducted in collaboration with a network of renowned experts in the field. It outlines the key trends that have the potential to shape the aesthetics landscape and become mainstream in the future – namely Proactive Beauty; Mindful Aesthetics; Fast Aesthetics; Beauty Fandom; Expressionality and Cancelling Age.

Are there any misconceptions around skin care/ aesthetics within the Asia Pacific market that Galderma is addressing?

A common misconception we see – not just in the Asia Pacific region but across the world – is that when it comes to aesthetics, companies don't invest in the same level of education, training and science. For us, this could not be further from the truth as Galderma is committed to rigorous science, and to staying at the forefront of emerging technologies, medical education, thought leadership and training, to address current and future aesthetic and dermatology needs.

For example, we have a long-standing commitment to supporting education within the dermatology community – especially through our GAIN and SKIN educational platforms. These initiatives involve knowledge sharing in both directions, with Galderma providing training to the community, which in turn allows us the opportunity to gather insights about unmet needs. Thanks to our heritage, expertise, and capability, we are uniquely placed to address these needs by delivering innovative and effective aesthetic solutions.

Is Galderma partnering with academic institutes to increase awareness on skincare/ aesthetics-based education?

Yes, for example, we worked with the Chinese Association of Plastics and Aesthetics (CAPA) on a continuous medical education course for lower face rejuvenation, based on the lower face rejuvenation consensus. It included both theoretical and hands-on session training and was attended by more than 1,000 healthcare professionals in China.

In addition, Galderma in India has established a strategic partnership with The Indian Association of Dermatologists, Venerologists and Leprologists (IADVL) Aesthetics Special Interest Group. This partnership, titled "Excellence in Injectable Aesthetics", involves us providing educational support for four physical workshops and a webinar on a variety of injectable aesthetics topics. The content has reached more than 800 dermatologists to date. BS

Dr Manbeena Chawla
manbeena.chawla@mmactiv.com

“Demand for skilled medtech professionals in the Asia Pacific region is growing rapidly”

2024 saw Japanese medtech firm Olympus receiving approval for the company’s first cloud-based AI endoscopy devices in the US and Europe, marking a significant milestone in Olympus' efforts to enhance clinical outcomes and operational efficiency in endoscopy, paving the way to launch its upcoming endoscopy solution, the “Intelligent Endoscopy Ecosystem”. The estimated revenue and annual growth rate during the fiscal year ending March 2025 of Olympus Corporation is approximately 1,009 billion yen/ 9 per cent. To find out more about the company’s strategic growth plans in the new year, BioSpectrum Asia interacted with Marc Radatt, Chief Executive Officer of Olympus Corporation Asia Pacific, Singapore. ***Edited excerpts:***

«

Marc Radatt,
Chief Executive Officer,
Olympus Corporation
Asia Pacific,
Singapore

Could you please share some details of the company's investment plans, and new product development in the coming years?

In emerging markets, demand for medical devices is growing due to rapidly increasing populations, lifestyle changes resulting from economic growth, and the expansion of medical infrastructures. The need for gastrointestinal (GI) endoscopes, which contribute to the early detection and treatment of GI cancers, is increasing as the incidence of cancer is expected to rise in the future. Conversely, emerging markets are facing a shortage of highly specialised endoscopists. Therefore, we will continue to increase our investment in training activities for endoscopists in these regions.

Following the establishment of a direct subsidiary in Indonesia in 2024, we will continue to focus our efforts on building our profile and collaborate with healthcare professionals (HCPs) to enhance patient outcomes and access to healthcare in this growing market. In light of the ongoing healthcare reforms across Southeast Asia, we are committed to working closely with HCPs across our region to advance healthcare through our ongoing professional training programmes. In addition, we will continue to roll out key products to various markets in the region across our gastrointestinal, respiratory, and urology portfolios by the fiscal year ending March 2026.

Olympus is engaged in the development of technology that leverages artificial intelligence (AI) and robotics to enhance the quality of medical care for patients and clinicians, while also expanding the scope of endoscopic diagnosis and treatment.

For example, the “Intelligent Endoscopy Ecosystem”, powered by a state-of-the-art software platform and AI, aims to elevate patient care by providing actionable insights throughout the patient journey. This platform is a transition from a hardware-centric model to one emphasizing continuous software innovations via over-the-air updates and on-demand apps, ensuring efficient and precise detection, diagnosis, and treatment.

The ecosystem aims to enhance clinical workflows through data-driven automation, improving efficiency, patient safety, and reducing human error. It also supports healthcare professionals by easing training and minimising mental workload, helping attract and retain next-generation talent. Non-clinical staff benefit from automated administrative solutions, such as inventory and asset management, optimising hospital operations.

We’re uniquely positioned to harness our extensive endoscopy portfolio, and we aim to maximise synergies and shape the future of endoscopy by leveraging data for better outcomes and efficiency.

Olympus has recently opened an R&D centre in Hyderabad, India. What are the major objectives of this new centre? Would you be partnering with local hospitals, medtech players to strengthen your presence in the country?

In June 2024, Olympus announced a strategic initiative to establish an R&D Offshore Development Center (ODC) in Hyderabad, India, in partnership with HCLTech. This move aims to diversify our innovation efforts by leveraging Hyderabad's status as a medtech hub and its talent pool. Hyderabad was chosen because it is a major metropolitan area known for being India’s medtech hub, which can provide the significant amount of talent needed for research and development necessary for Olympus' solutions.

The initiative is part of our broader strategy to expand global R&D capabilities, with plans to establish an in-house R&D centre in Hyderabad in the future, complementing existing centres in Japan, the US, and Europe.

Furthermore, we plan to strengthen our presence in India by collaborating with AIG Hospitals, Hyderabad, on joint research projects. Through this partnership with a leading healthcare institution, our aim is to leverage clinical expertise to develop innovative medical solutions addressing global patient needs.

These initiatives highlight our commitment to advancing medical technology, expanding our global reach, and delivering impactful healthcare solutions.

What are the current challenges facing the endoscopy market in the Asia Pacific region? How is Olympus addressing those challenges?

The lack of trained physicians who can perform endoscopy procedures is a challenge in the region, and is having a detrimental impact on the accessibility and quality of patient care. Consequently, Olympus is committed to facilitating professional education in a variety of formats, including in-person training at one of our regional training and education centres and via online training. This is our key focus as we seek to address this regional challenge.

We have also been actively working with medical institutions; for example, we have recently announced our partnership with Rizal Medical Center in the Philippines. This partnership was established to train the next generation of endoscopists and to ultimately contribute to the development of digestive medicine in the Philippines. It will require the sustained commitment of numerous contributors in the endoscopy market over an extended period. With “Patient Focus” as our primary objective, we are determined to make a meaningful impact, ensuring that more patients in the region have access to quality endoscopy procedures.

In general, the demand for skilled medtech professionals in the Asia Pacific region is growing rapidly, with some markets experiencing a more significant increase than others. To meet this demand, it is essential that we continue to invest in the development of medtech professionals to ensure a steady supply of qualified talent.

We have observed that many medtech companies in the Asia Pacific region often fulfill the requirement for skilled workforces by hiring from other companies in the same industry. In this context, we offer a structured training programme tailored to specific roles, including sales, repair services, and the quality assurance segment. We have positioned our organisation as a destination for both existing employees seeking to enhance their skills and those transitioning from other industries, equipping them with the knowledge and tools to excel in the medtech sector.

Training is conducted remotely or in person at local offices or dedicated regional training centres, such as the Olympus Thailand Training and Education Center (T-TEC). In some cases, employees are sent abroad to attend courses in countries like Japan and Germany, where a significant portion of our research and development and manufacturing occurs.

How is Olympus supporting the growth of medtech startups in the Asia Pacific region?

As a leading global medtech company, we recognise the startup space as a vital source of inorganic innovation, a crucial driver of growth for any business.

In 2022, we established the Olympus Asia Pacific Innovation Program. This initiative invited regional startups to pitch to Olympus, with the winner receiving a funding grant and an exclusive mentorship programme with key thought leaders from our company.

Investing in or collaborating with startups allows large corporations to expand their innovation pipeline and bring new solutions to the market more swiftly. Olympus has invested in, collaborated with, and acquired SMEs (small and medium-sized enterprises) and startups with the goal of developing next-generation solutions that advance minimally invasive treatment and the detection, diagnosis, and treatment of lesions. An example of this would be our iTind urology offering. By integrating innovations, Olympus has remained true to one of our core strategies of focusing on the provision of minimally invasive surgical solutions. BS

Dr Manbeena Chawla
manbeena.chawla@mmactiv.com

Middle East: A rising powerhouse in Medtech and Diagnostics

The Middle East's medtech and diagnostics sector is undergoing a dynamic transformation, fuelled by rapid technological advancements and strategic healthcare investments. This burgeoning industry is poised for significant growth, driven by a convergence of regional and global trends. As the region continues to embrace innovation and prioritise healthcare, it is well on its way to becoming a global hub for medtech and diagnostics, attracting investment, fostering collaboration, and driving advancements that will shape the future of healthcare.

Garima Malhotra,
Associate Partner,
Healthcare and
Lifescence,
Praxis Global Alliance

The global medtech market, valued at an impressive $640 billion, is on track to surpass $960 billion by 2030 growing at a CAGR of 7 per cent, signalling transformative growth in healthcare innovation. Amid this surge, the Middle East is emerging as a key player, with its medtech market projected to grow from $18 billion to over $27 billion by 2030 at a robust CAGR of 7 per cent. Similarly, the region's diagnostics market, currently worth $6 billion, is expected to exceed $8 billion by 2030, driven by a 6.5 per cent CAGR. This remarkable growth is fuelled by rising healthcare expenditures, a growing prevalence of chronic diseases, and government-led initiatives to modernise healthcare infrastructure.

Countries like Saudi Arabia and the UAE are spearheading this transformation with dedicated healthcare spending plans and a focus on cutting-edge technologies. Diagnostic imaging, minimally invasive surgery, and wearable devices are revolutionising healthcare delivery. Furthermore, advancements in artificial intelligence (AI) and telemedicine are reshaping the region's healthcare landscape.

Addressing regional needs

The Middle East faces unique healthcare challenges, including a high prevalence of chronic diseases like diabetes and cardiovascular disease, coupled with an aging population. This has fuelled the demand for advanced diagnostic and treatment technologies. Investments in public-private partnerships, healthcare digitisation, and medical tourism have further accelerated the growth of the medtech and diagnostics market. Portable diagnostic tools, AI-enabled imaging systems, and robotic surgery devices are driving a shift towards patient-centric care. The emphasis on preventive healthcare and early disease detection is also accelerating the adoption of innovative diagnostic solutions.

From importer to innovator

Traditionally reliant on imported medical technologies, the Middle East is now transitioning into a global leader in healthcare innovation. Strategic investments in local research, technology integration, and partnerships are driving this transformation, enabling the region to emerge as a global innovator. Saudi Arabia and the UAE are spearheading this shift. With Vision 2030, Saudi Arabia is fostering a strong national ecosystem for medtech, prioritising genomics, AI-driven healthcare solutions, and precision medicine. The UAE, through initiatives like Mubadala Healthcare and G42's M42, is strengthening its position as a regional leader in advanced medical diagnostics and technological innovation. This shift towards innovation is further evidenced by the growth of technology incubators and accelerators dedicated to medtech startups in the region. These initiatives provide budding entrepreneurs with the resources and mentorship needed to develop and commercialise their innovations, contributing to a thriving medtech ecosystem. Efforts to localise medical technology production and nurture domestic talent are fostering self-reliance and creating opportunities for groundbreaking advancements. This strategic focus is turning the Middle East into a hub for cutting-edge healthcare solutions, paving the way for a sustainable and innovative future.

Digital transformation

The Middle East is experiencing a digital revolution in diagnostics, driven by rapid technological integration and strategic investments in AI, machine learning, and connected healthcare technologies. Sophisticated tools like AI-powered imaging, remote monitoring systems, and predictive analytics are enhancing healthcare precision and accessibility. The UAE and Saudi Arabia are leading the way with national digital health strategies that prioritise telemedicine, electronic health records, and intelligent diagnostic tools.

Innovative startups and established healthcare providers are collaborating to develop cloud-based diagnostic platforms, integrated genomic screening technologies, and real-time data analytics solutions that enable personalised and proactive healthcare interventions. These advancements not only improve diagnostic accuracy and efficiency but also address regional healthcare challenges related to chronic disease management, population health monitoring, and cost reduction.

Investment hotspots

Through strategic investments, technical developments, and governmental backing, the United Arab Emirates, Saudi Arabia, and Qatar have taken the lead in revolutionising the healthcare industry. These countries are not just modernising healthcare, but also fostering the growth of associated sectors.

Dubai Healthcare City is at the heart of the UAE's drive to change digital health in the region. The city is a burgeoning centre of innovation that draws both established medical technology firms and startups. Using regulatory sandboxes, which enable organisations to test and implement cutting-edge technology without the typical bureaucratic obstacles, the UAE government has also significantly contributed to the expansion of this industry. Additionally, the UAE has seen noteworthy venture capital investment in the healthcare sector, indicating rising assurance in its medtech and diagnostics markets. The UAE has established itself as a regional leader due to its emphasis on developing a strong healthcare system and a rising need for digital health solutions.

Saudi Arabia is now at the centre of medical technology investments because of its Vision 2030 healthcare modernisation strategy. A comprehensive strategy to modernise the country's healthcare system and promote the localisation of medical technologies is called Vision 2030. To establish a national health technology ecosystem that includes state-of-the-art medical equipment, digital health services, and telemedicine solutions, Saudi Arabia is making significant investments in healthcare infrastructure. The government's move to localise medical technology production makes sure the country imports cutting-edge equipment while also stimulating local talent and innovation. As the biggest market in the Gulf Cooperation Council (GCC), Saudi Arabia's emphasis on technology-driven healthcare reforms is propelling the regional medical technology market.

Qatar's proactive approach places a strong priority on cutting-edge medical research, specialised technologies, and global partnerships. The nation has established itself as a leader in medical research by making large investments in the expansion of healthcare innovation centres. Qatar's focus on specialised medical technologies is helping the country make major strides in gene therapy, cancer research, and diagnostic tools. In order to enhance its capacities and accelerate the development of cutting-edge medical technology, Qatar also actively cooperates with international research organisations. These partnerships are crucial to strengthening the regional healthcare system and maintaining the nation's leadership in medical technological advancements.

Challenges and opportunities

While the Middle East's medtech and diagnostics sector is on an upward trajectory, it faces challenges such as regulatory complexities, talent shortages, and the need for robust data privacy frameworks, including data protection laws and secure data management systems. Addressing these challenges will be crucial to sustaining growth and innovation. Opportunities abound in areas such as personalised medicine, wearable technologies, and digital health platforms. By leveraging emerging technologies and fostering collaborative ecosystems, the region can continue to enhance its healthcare infrastructure and improve patient outcomes.

A glimpse into the future

With strong government support, substantial investments, and a commitment to innovation, the Middle East is poised to become a global leader in healthcare innovation. By continuing to invest strategically in the medtech sector, the region is not only enhancing its healthcare infrastructure but also paving the way for a future where medical technology plays a central role in improving public health.
The convergence of technology, investment, and a proactive approach to healthcare is creating a vibrant and promising medtech landscape in the Middle East, with the potential to transform healthcare delivery and improve the lives of millions. As the region continues to embrace innovation and prioritise healthcare, it is well on its way to becoming a global hub for medtech and diagnostics, attracting investment, fostering collaboration, and driving advancements that will shape the future of healthcare. BS

When Clinical Trials Suffer From 'Complicated' Interactions

Diversity in culture, language, and data gathering methods will further increase the difficulty of clinical trials as they become more international, particularly with the growing number of sites being employed across China, Japan, South Korea, and India. Clinical trial management involves several scientific, commercial, and practical requirements that the industry will continue to struggle to satisfy without more cooperation across research sites, sponsors, and stakeholders. The need for better site-sponsored-CRO coordination will only increase as clinical trials continue to become more complicated.

«

Dr Christine Senn,
Senior Vice President,
Site-Sponsor Innovation,
Advarra

When almost half of clinical trial stakeholders describe their working relationships as "complicated," it's a sign that something needs to change.

That sentiment was one of several findings that came to light with Advarra's recent industry survey of more than 200 stakeholders across the clinical research ecosystem. The results, which included responses from clinical research sites, sponsors, and clinical research organisations (CROs), highlight significant barriers to collaboration while offering concrete steps to overcome them.

The feedback provides a picture of an industry grappling with communication gaps, staffing shortages, and technology overload. However, the findings also point to practical solutions that could transform these strained relationships and accelerate the development of new treatments.

While nearly two-thirds of sponsors say their relationship with sites is "collaborative," just about half of sites say the same about sponsors, and only 31 per cent characterise their relationship with CROs as such. The survey also found efficiency gaps – sites reporting they must copy or transcribe data between systems about 60 per cent of the time, and the same percentage saying they frequently enter identical data into multiple systems. These duplications can lead to data errors and trial delays.

Overcoming these barriers will be critical in 2025, as clinical trials continue to become more complex as new regulatory requirements kick in and stakeholders change or add new technology systems to generate and capture data. As clinical trials become more global – especially with the increasing number of sites being used across China, Japan, South Korea, and India – differences in culture, language and data collection systems will only add to the complexity. Without greater collaboration between research sites, sponsors, and stakeholders, the industry will continue to struggle to meet the many scientific, business, and practical demands related to running clinical trials.

Communication Gaps Persist Despite Frequent Contact

Perhaps surprisingly, the survey found that frequent communication doesn't necessarily mean effective communication. Despite regular contact (approximately weekly), 60 per cent of site respondents and 43 per cent of sponsor/CRO respondents identified improved communications as a critical need. The disconnect, then, lies not in the quantity but in the quality and consistency of interactions. Sites particularly emphasised the need for clearer messaging between sponsors and CROs, noting that misalignment between these parties often creates confusion at the site level.

Staff Training Challenges

Concerns regarding staffing have decreased recently, though respondents emphasised the need for better training and education, especially for new clinical research associates (CRAs). Sites specifically called for more comprehensive education around protocol requirements and study procedures. This is a critical area to focus on, since protocol deviations are the top cause of FDA warning letters, due to failure to follow investigation plans.

A well-respected organisation is working on providing tools and resources to help with these needs. The Association of Clinical Research Professionals (ACRP), a non-profit organisation, has launched a consortium that includes sponsors,

> *Overcoming the barriers for CROs will be critical in 2025, as clinical trials continue to become more complex as new regulatory requirements kick in and stakeholders change or add new technology systems to generate and capture data. As clinical trials become more global differences in culture, language and data collection systems will only add to the complexity. Without greater collaboration between research sites, sponsors, and stakeholders, the industry will continue to struggle to meet the many scientific, business, and practical demands related to running clinical trials.*

CROs, investigator sites, academic institutions and regulatory agencies with a goal of building a diverse, research-ready clinical workforce. The group offers competency standards, recruitment help, industry education and awareness campaigns.

Technology: Promise vs Reality

While technology should theoretically streamline collaboration, the survey revealed significant friction points. Though 46 per cent of sites and 53 per cent of sponsors/CROs agreed that improved systems would enhance their relationships, only 29 per cent of sites felt that current sponsor/CRO technology solutions deliver on promises of integration and efficiency. The challenge isn't necessarily the number of systems, but their lack of integration. Sites often must manage different platforms for training, investigational product accountability, electronic regulatory documents and data capture – with these systems varying across trials even from the same sponsor.

5 Actions to Transform Collaboration

Based on the survey findings, Advarra has identified five key actions that organisations can take to improve site-sponsor-CRO collaboration and accelerate clinical trials:

1. Build Integrated Technology Systems: Rather than adding more standalone solutions, organisations should focus on connecting the ecosystem and integrating existing systems. This could include implementing single sign-on capabilities and ensuring data flows seamlessly between platforms to reduce human error, automate repetitive tasks, streamline workflows and ultimately save clinical research professionals' time. The survey found that 85 per cent of respondents considered a centralised trial communications platform valuable or extremely valuable.

2. Enhance Communications Channels: Organisations should establish consistent points of contact and standardised communication protocols to manage turnover and ensure business continuity. Nearly all respondents (92 per cent of sponsors/CROs and 98 per cent of sites) rated having a single point of contact as valuable to extremely valuable.

3. Optimise Real-time Reporting and Visibility: Real-time access to trial data and performance metrics provides all stakeholders visibility to the same data, enabling teams to identify, align, and address issues quickly. This transparency enables faster decision-making and reduces the need for constant status updates.

4. Empower Protocol Adherence: Clear, step-by-step guidance for site staff can reduce protocol deviations and improve compliance. This is a process along the clinical trial pathway and should not be relegated only to the monitoring stage. The initial step is certainly a well-written protocol that is clear and conveys the same instructions in prose as in all tables and reference materials. The second step returns us to training: A well-trained sponsor or CRO representative is key to well-trained site staff. A strong CRA makes a big difference in site training, providing clarifications, responsiveness to site questions, and problem escalation, as needed. Protocol writing plus CRA and site staff training are preventative actions, while regular monitoring provides an opportunity for corrective actions.

5. Improve Staff Training: With the clinical research workforce facing significant shortages, investment in comprehensive training programmes is crucial for protocol success. This includes both initial onboarding and protocol training to reduce deviations and ongoing education to keep pace with evolving trial complexity.

Looking Ahead

Implementing these actions will require commitment from sites, sponsors, and CROs to ensure the changes are made systematically. Organisations that take concrete steps to address these challenges now will be better positioned to conduct successful trials in a competitive research environment. As clinical trials continue to grow in complexity, improved site-sponsored-CRO collaboration will become increasingly essential for bringing new treatments to patients more quickly and efficiently.

Universities in China & Pakistan ink MoU for advanced research in health sciences

The School of Medicine, Shihezi University, Xinjiang, China, and the Centre of Excellence in Molecular Biology (CEMB), University of the Punjab, Lahore, Pakistan, have signed a landmark Memorandum of Understanding (MoU) to foster collaboration in cutting-edge scientific research and academic exchange. This agreement aligns with global advancements in health sciences and marks a significant step in enhancing bilateral ties between the two nations. The partnership aims to establish collaborative research centres, promote researcher and student exchanges, and organise international conferences to address critical challenges in health sciences. Both institutions are dedicated to developing technical research projects, sharing academic data, and pursuing joint intellectual property rights. The agreement also emphasises mutual support for filing research proposals in China, Pakistan, and international organisations, ensuring a global impact. For Pakistan, the MoU represents a leap toward enhancing its research infrastructure and global scientific standing.

IIT-B joins hands with Tohoku University to offer MTech, PhD dual degree programmes

The Indian Institute of Technology, Bombay (IIT-B) has entered into a Memorandum of Understanding (MoU) with Japan's Tohoku University to launch the IIT Bombay-Tohoku University Joint Academic & Research Programme. The initiative will feature collaborative Master's and PhD programmes, providing participants with the unique opportunity to receive dual mentorship from experts at both IIT Bombay and Tohoku University. In addition, students will gain access to world-class research facilities, cutting-edge resources, and the opportunity to immerse themselves in the academic environments of two prestigious universities. This partnership is designed to foster cross-border academic collaboration, enriching the learning journey and advancing research in various fields of study. The programme will initially focus on a dual degree initiative for research purposes, with the potential to evolve into a Joint Institute over time, pending necessary approvals from both the senate and government. Both IIT Bombay and Tohoku University are eager to launch this collaboration at the earliest, driven by a shared vision to implement cutting-edge academic and research programmes that address global challenges.

Singapore launches industry's first talent programme for biopharmaceutical sector

In collaboration with the Biopharmaceutical Manufacturer's Advisory Council (BMAC) and supported by the Singapore Economic Development Board (EDB), Republic Polytechnic (RP) has launched the Talent Advancement Programme (TAP), the first-of-its-kind initiative across local polytechnics designed to prepare students for the growing biopharmaceutical industry. The strategic partnership with the BMAC, comprising 16 globally leading biomedical sciences companies, ensures a sustainable pipeline of talent for this high-growth industry in Singapore. As a key feature, it will also offer students an extensive 36-week internship in their final year, providing unparalleled exposure to the inner workings of leading biopharmaceutical companies. Students who are part of the TAP acquire deeper expertise and practical experience that align with the Biopharmaceutical Manufacturing Skills Framework, making them highly sought-after by employers.

Dr Krishna M Ella receives prestigious INSA India fellowship

Dr Krishna Ella, a distinguished scientist, co-founder and Executive Chairman of Bharat Biotech International, has been recognised with the prestigious India Fellowship of the Indian National Science Academy (INSA) for the year 2025, for his contributions to new knowledge, discoveries, development of new vaccine technologies, noteworthy improvement in existing technologies. Dr Ella joins a list of distinguished scientists, industry leaders and luminaries from varied fields. This year a total of 61 fellowships were awarded, and for the first time ever, the fellowships were awarded to industry leaders. Elected INSA fellows may attend and vote at INSA general meetings and can propose other individuals for fellowships or INSA awards. Dr Ella's fellowship recognition came for his pathbreaking vaccine development contributions. Close to 3 decades, Bharat Biotech has been in the forefront of vaccine discovery, manufacturing and distribution having delivered more than 9 billion doses of vaccines to over 125 countries. Today, it boasts of 18 vaccines in its portfolio.

GRIT Bio appoints Dr Jie Jia as Chief Operating Officer

Shenzhen GRIT Biotechnology Co., a leading company in cell therapy globally, has announced the appointment of Jie Jia, Ph.D., as Chief Operating Officer (COO). Dr Jia brings over 20 years of strategic leadership experience within the biopharmaceutical and healthcare industries, especially in managing complex projects, establishing new business operations, optimising processes, and guiding critical decision-making initiatives. Prior to joining GRIT Bio as Chief Operating Officer, Dr Jia served as a senior executive at CARsgen Therapeutics, where he successfully transformed the company from a startup to a public entity by establishing and spearheading US operations. Before transitioning into the industry, Dr Jia was an assistant professor at the Cleveland Clinic and Case Western Reserve University. His experience in leading biotech companies and developing markets and collaborations overseas aligns seamlessly with GRIT Bio's international vision.

Singapore appoints Tan Chong Meng as Chairman of National University Health System

The Minister for Health has appointed Tan Chong Meng as the Chairman of the Board of the National University Health System (NUHS) from January 1, 2025 to December 31, 2027. Meng is the Chairman of JTC Corporation and has been a member of the NUHS Board since 2011, serving as Deputy Chairman since 2022. He is an accomplished business leader with extensive experience in strategy and management across various private and public sector roles, including as a current Board Director of Temasek Holdings and previously as the Group Chief Executive Officer of PSA International. As Chairman of NUHS, Meng will provide strategic leadership and guidance to the cluster, as NUHS continues to transform its health system, pedagogy and workforce to drive clinical excellence through research and innovation, and provide safe and quality care for patients while ensuring longer-term sustainability. He will also play a pivotal role in leading NUHS through key infrastructure projects such as the development of the new Tengah General and Community Hospitals, and the redevelopment of the Alexandra Hospital (AH) campus and National University Hospital (NUH) campus.

Prof. Christian Wolfrum to join NTU as Deputy President and Provost

Nanyang Technological University, Singapore (NTU Singapore) has announced that Professor Christian Wolfrum, an eminent biomedical scientist, will be joining the University as the next Deputy President and Provost. He succeeds Professor Ling San, who will step down from his role as Deputy President and Provost on June 30, 2025. As the next Deputy President and Provost, Prof. Wolfrum will serve as NTU's chief academic officer, overseeing college deans and school chairs to advance educational and research excellence and ensure high-quality academic programmes. Committed to holistic talent development, he will strengthen NTU's human capital in its pursuit of distinction. He joins NTU from ETH Zurich in Europe. Since 2007, he has been teaching and conducting research in the interdisciplinary field of biomedicine. His research focuses on the fundamentals of fat cell formation and its impact on how metabolic diseases such as obesity and Type 2 diabetes develop.

Julia Wang steps in as Executive Vice President and CFO at Labcorp

Labcorp, a global leader of innovative and comprehensive laboratory services, has announced that Executive Vice President and Chief Financial Officer (CFO) Glenn Eisenberg has retired from the company and Julia Wang has joined this position. Eisenberg will remain at Labcorp as Special Advisor to the CEO through April 2025 to ensure a seamless transition of his current role and assist with strategic initiatives underway within the company. Julia brings deep global strategic and financial experience across the diagnostic, pharmaceutical/biotech, medical device and consumer products industries. Most recently, she served as CFO of BeiGene, which she joined in June 2020 as Senior Vice President, Enterprise Optimisation and Deputy CFO. While at BeiGene, she was instrumental in driving business transformations through accelerating growth, nurturing innovation and cultivating a culture of sustainable operating efficiencies. Prior to joining BeiGene in 2020, Julia served as Senior Vice President, Global Business Finance and Corporate Planning at Alexion Pharmaceuticals.

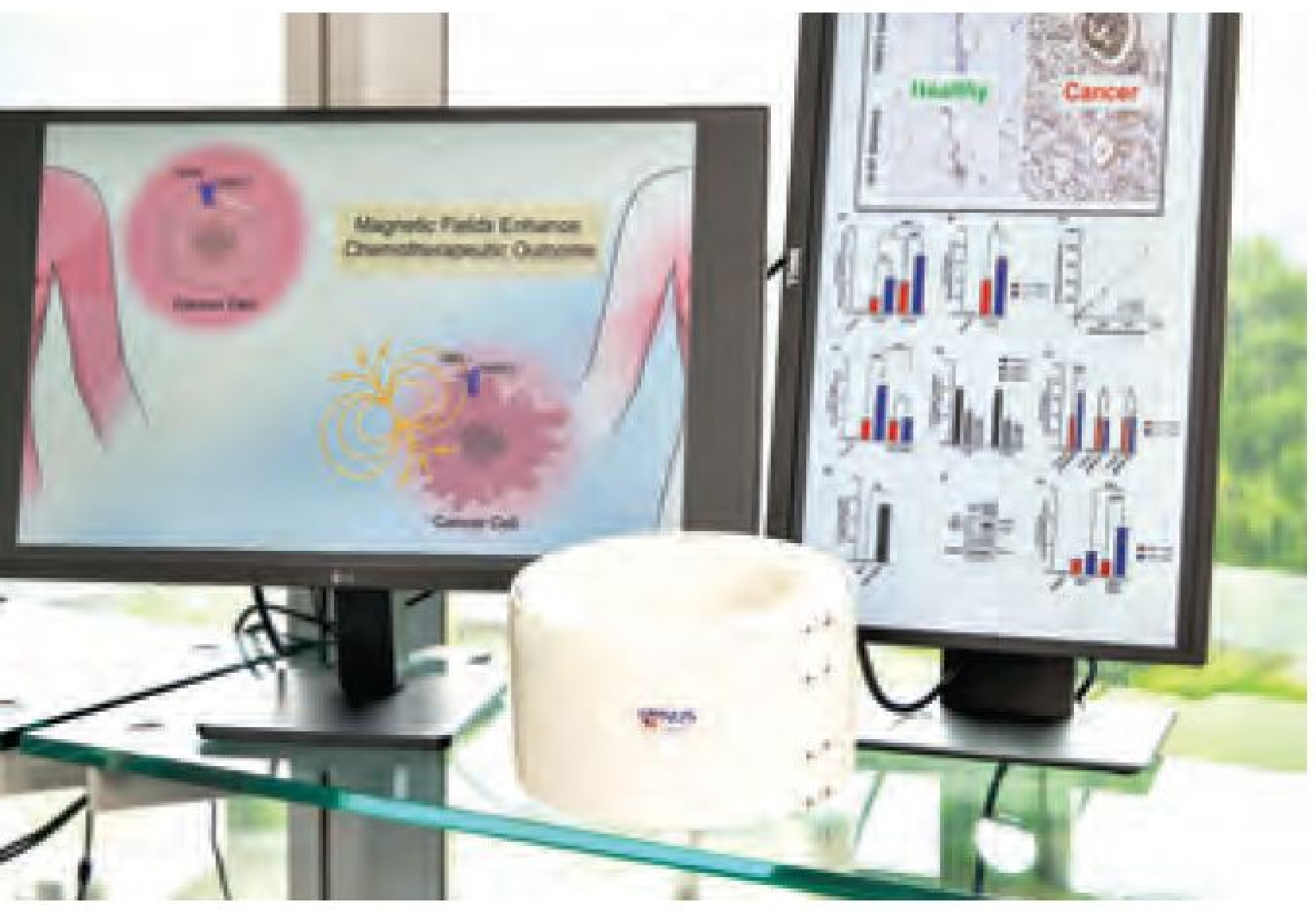
BeiGene names Giancarlo Benelli as Head of Europe biz

BeiGene, a Hong Kong-headquartered oncology company that intends to change its name to BeOne Medicines Ltd., has announced the appointment of Giancarlo Benelli as Senior Vice President and Head of Europe, effective January 1. This appointment will enhance the company's commitment to bring impactful medicines to more patients across Europe. Benelli is a global executive with over 20 years of experience in the pharmaceutical industry including at Novartis and AstraZeneca. He was most recently Vice President and Head Radioligand Therapy International Markets at Novartis. Prior to his role as Head Radioligand Therapy International Markets at Novartis, Benelli served as General Manager at Advanced Accelerators Applications, where his responsibilities included restructuring the manufacturing, R&D, and commercial organisations in Saint Genis Poully post-Adacap acquisition by Novartis, ensuring business continuity and successfully launching Lutathera in both France and Italy amid post-merger challenges.

Korea develops innovative injectable adhesive hydrogel for bone regeneration

A research team from South Korea-based Pohang University of Science and Technology or POSTECH's Department of Chemical Engineering and Graduate School of Convergence Science and Technology, along with the Department of Chemical Engineering, has developed an innovative injectable adhesive hydrogel for bone regeneration. This hydrogel utilises harmless visible light to simultaneously achieve cross-linking and mineralisation without the need for bone grafts. Bone defects, which arise from various causes such as trauma, infection, and congenital abnormalities, are becoming increasingly common in ageing societies. Conventional treatments often involve bone grafts combined with serum or bioadhesives to fill the defect. However, existing injectable hydrogels face challenges such as difficulty in maintaining their shape within the body and limited adhesive strength. Moreover, traditional methods using bone grafts with adhesive materials often fail to achieve simultaneous "bone regeneration" and "adhesion." The POSTECH team has introduced a novel system that addresses these limitations.

Singapore boosts chemotherapy uptake in breast cancer treatment with localised magnetic fields



Researchers at the National University of Singapore (NUS) have developed a non-invasive method to improve the effectiveness of chemotherapy while reducing its harmful side effects. By applying brief, localised pulses of magnetic fields, the team demonstrated a significant increase in the uptake of doxorubicin (DOX), a widely used chemotherapy drug, into breast cancer cells, with minimal impact on healthy tissues. This selective uptake enables more precise targeting of cancer cells, potentially improving treatment outcomes and reducing the adverse effects often associated with chemotherapy. The study is the first to systematically show how pulsed magnetic fields enhance DOX uptake in cancer cells. The team also showed that this approach could suppress tumours at lower drug doses. The team's research builds on earlier work from 2022, which first revealed that certain cancer cells are more vulnerable to magnetic field therapy. The researchers are currently in discussions with potential investors in Southeast Asia and the United States to translate this technology from bench to bedside.

India designs world's first robotic hand exoskeleton for stroke rehabilitation

The Indian Institute of Technology Kanpur (IIT-K) has developed a first-of-its-kind Brain-Computer Interface (BCI)-based Robotic Hand Exoskeleton to transform stroke rehabilitation and redefine post-stroke therapy by accelerating recovery and enhancing patient outcomes. This innovation is the result of 15 years of rigorous research by Prof. Ashish Dutta from the Department of Mechanical Engineering at IIT Kanpur, supported by Department of Science and Technology (DST), UK India Education and Research Initiative (UKIERI), and Indian Council of Medical Research (ICMR).

The BCI-based robotic hand exoskeleton employs a unique closed-loop control system that actively engages the patient's brain during therapy. It integrates three essential components: a Brain-Computer Interface that captures EEG signals from the brain's motor cortex to assess the patient's intent to move, a robotic hand exoskeleton that performs therapeutic hand movements, and software that synchronises brain signals with the exoskeleton for real-time assist-as-required force feedback.

Hong Kong builds genome inventory for children to promote early-life microbiome research

Researchers from The Chinese University of Hong Kong's (CUHK) Faculty of Medicine (CU Medicine) have developed the Metagenome-Assembled Genome Inventory for Children (MAGIC), a pioneering global database that enhances the understanding of gut microbiome dynamics in early life. The team's MAGIC database lays a solid foundation for and opens prospects towards studying early-life microbiome research globally given the complex interactions of microbiomes with human health since the inception of life. The early-life gut microbiome is crucial for the development of immune and metabolic functions. However, current microbiome databases are primarily based on adult sequences and are predominantly representative of Western populations, which constrains our understanding of infant microbiota maturation and its role in health conditions. The researchers have developed the MAGIC database using a robust collection of 20,172 gut metagenomes from children aged 0 to 7 years from 87 geographically diverse studies, including 613 metagenomes from CU Medicine's birth cohort study MOMmy (MOther-infant Microbiota transmission and its link to long terM health of babY) since 2019.

Australia manufactures 3D printed scaffolding to rebuild jaw bones

Clinicians have successfully used custom-made 3D printed bone scaffolds, printed on-site at The University of Queensland (UQ) in Australia, to rebuild part of a man's jawbone. Professor Saso Ivanovski from UQ's School of Dentistry, who led the clinical trial, said the case demonstrated the safe and effective use of the technology which uses biocompatible material, eliminating the need for secondary surgery to remove the scaffold. After this initial success, more polycaprolactone (PCL) scaffolds have been printed at UQ's Oral Health Centre and used in dental reconstructive surgery on nine more patients. Since the medical grade synthetic polymer used is more cost effective than currently available non-resorbable metallic commercial alternatives, this is a significant step forward in how 3D printing can be used to create affordable, safe and effective bone implant solutions to reconstruct jawbones and teeth for people in need. The UQ team will now expand the trial to work with clinicians from around Australia and Spain to optimise the scaffold design so that it can be widely available for patients.

Japan suggests addition of PVA into drugs for strong antitumour activity

Treatment for more advanced and difficult-to-treat head and neck cancers can be improved with the addition of polyvinyl alcohol (PVA), the same ingredient used in children's glue. Researchers at the University of Tokyo, Japan found that combining PVA with a boron-containing compound, D-BPA, improved the effects of a type of radiation therapy for cancer, compared to currently clinically used drugs. The PVA made the drug more selective of tumour cells and prolonged drug retention, helping to spare healthy cells from unnecessary radiation damage.

Neither PVA nor D-BPA exhibit pharmacological activity when administered alone. However, combining these compounds resulted in remarkably elevated tumour accumulation, prolonged retention and potent therapeutic efficacy, even when compared with a clinically used drug. The team is promoting joint industry-academia collaboration to further this research and hope to apply this achievement to the treatment of other challenging cancers.

Thermo Fisher supports world's largest human proteomics study

Thermo Fisher Scientific Inc. has announced that the UK Biobank Pharma Proteomics Project (UKB-PPP) has selected its Olink Explore Platform to support the world's largest human proteomics study of its kind. UKB-PPP aims to analyse more than 5,400 proteins from 600,000 samples to fuel the discovery of new protein biomarkers that can be used to predict, diagnose and treat diseases. Advancement of the Olink Explore Platform, which is designed to enable deep analysis of the thousands of proteins in the human body, provides researchers with the ability to study the role they play in many types of diseases. Published studies in this emerging field, known as population proteomics, have demonstrated the potential protein signatures have to help advance the future of precision medicine. Acquired by Thermo Fisher in July 2024, the Olink proteomics platform is a next generation proteomics solution that empowers researchers to measure more than 5,400 proteins with high specificity, speed, and the flexibility to study complex biological processes.

Qiagen increases QIAcuity digital PCR high-order multiplexing capabilities

Qiagen has announced a significant increase in the powerful capabilities of its QIAcuity Digital PCR (dPCR) system with a more than two-fold increase in the number of targets that can be simultaneously analysed from a single biological sample. The new capabilities overcome the assay design challenges of currently available quantitative multiplex PCR methods, making QIAcuity digital PCR ideal for applications such as translational research, microbiome analysis, pathogen detection and the development of cell and gene therapies. Through a software upgrade and the launch of the new QIAcuity High Multiplex Probe PCR Kit, customers can now analyse up to 12 targets simultaneously compared to the earlier version offering up to five targets, using their existing instruments without any hardware changes. This upgrade provides QIAcuity customers with a powerful technology that amplifies and detects multiple targets within a single reaction.

Bruker launches infrared imaging microscope for pharma and life science research

US-based Bruker Corporation has announced the launch of the LUMOS II ILIM, a quantum cascade laser (QCL) based infrared (IR) imaging microscope. The new LUMOS II ILIM redefines performance standards, enabling pharma and life science researchers to capture ultrafast IR images of expansive areas with enhanced spatial resolution. The LUMOS II ILIM features a patented coherence reduction method for infrared laser imaging essentially free from artifacts in both transmission and reflection mode. With a very large field of view and complete automation, it allows for the rapid determination of chemical complexity in biological tissues. Using artificial intelligence (AI)-powered data evaluation, LUMOS II ILIM workflows allow for discoveries in life science, pharma and disease research. Integration with Bruker's MALDI Imaging methods enable multimodal imaging to characterise tissues with enhanced analytical depth. The LUMOS II ILIM can also be used for rapid pharmaceutical tablet inspection and particle identification, including automated sampling. Users can harness a Python interface to adapt the LUMOS II ILIM to specific requirements and custom workflows.

Repligen unveils advanced UV-based Variable Pathlength Technology system for biopharma manufacturers

CTech
SoloVPE
PLUS
Variable. Pathlength. Technology.
REPLIGEN

US-based Repligen Corporation has announced the commercial launch of its CTech SoloVPE PLUS System, the most advanced UV-based Variable Pathlength Technology system now available to biopharmaceutical manufacturers. The SoloVPE PLUS System is engineered to offer accuracy, speed, and ease-of-use for at-line ultraviolet-visible (UV-Vis) concentration measurement in complex biological production workflows, from process development scale through cGMP manufacturing. As the bioprocess industry shifts toward higher drug concentration formulations to improve efficiency and reduce production costs, there has been a growing need for faster, more reliable and more accurate analytical tools. The SoloVPE PLUS System addresses this need, utilising variable pathlength spectroscopy to deliver precise concentration measurements in under 30 seconds, without the need for dilution or background correction. This innovative technology is a significant addition to Repligen's process analytics portfolio, advancing the company's at-line capabilities and complementing both its in-line, real-time FlowVPX System and fully integrated RPM (Real-time Process Management) TFF Systems.

Merck to acquire HUB Organoids, advancing Next Generation Biology Portfolio

MilliporeSigma, the US and Canada Life Science business of Merck KGaA, Darmstadt, Germany, has announced that the Life Science business of Merck KGaA, Darmstadt, Germany has signed a definitive agreement with the intention to acquire HUB Organoids Holding B.V. (HUB). Organoids are cell culture models that functionally resemble an organ. They have the potential to speed up drug development, improve understanding of disease treatment in diverse populations, and reduce the industry's reliance on animal testing. HUB is a pioneer in the field of organoids. The company is based in Utrecht, Netherlands and employs some 70 people. HUB possesses the foundational patent portfolio on organoids and has a service offering ranging from new model generation to assay development and high-throughput screening. This adds to and enhances Merck KGaA, Darmstadt, Germany´s Life Science business portfolio of cell culture reagents, tools and benchtop instruments for academia, biotech, and pharma customers. HUB's technology enables drug developers to identify and validate potential clinical candidates in a patient-relevant in vitro system, closing the gap between the lab and clinical trials.

Bio-Techne and Waters ink co-marketing agreement for biotherapeutic characterisation

American life sciences company Bio-Techne Corporation, a leader in automated platforms for biotherapeutic characterisation, has announced a co-marketing and co-promotion agreement with Waters Corporation aimed at expanding the reach of advanced biotherapeutic characterisation and development processes. The companies plan to combine their complementary expertise on charge separation (Bio-Techne's MauriceFlex System) and liquid chromatography mass spectrometry (BioAccord LC-MS System from Waters) to deliver innovative solutions that optimise workflows, improve precision, and accelerate development timelines. Moving forward, application scientists from both companies are working on the analysis of additional classes of biomolecules and plan to exhibit the joint results in a poster at upcoming scientific conferences.

biotechne
MauriceFlex

Trump Slugs WHO with Executive Order

On January 20, Donald Trump, immediately after assuming the charge as President of the United States for the second term, signed an Executive Order withdrawing the USA from the World Health Organization (WHO). With this Order, the USA is scheduled to leave the WHO on January 22, 2026 as the resolution requires the country to provide one year's notice to leave the organisation.

The Order points out that the USA noticed its withdrawal from the WHO in 2020 due to the organisation's mishandling of COVID-19 that arose out of Wuhan, China, and other global health crises, its failure to adopt urgently needed reforms, and its inability to demonstrate independence from the inappropriate political influence of WHO member states. In addition, the WHO continues to demand unfairly onerous payments from the USA, far out of proportion with other countries' assessed payments. China, with a population of 1.4 billion, has 300 per cent of the population of the USA, yet contributes nearly 90 per cent less to the WHO.

The USA, historically the largest contributor to the WHO, is expected to contribute $958 million in 2024–25, which is a 14.53 per cent share of the organisation's budget. This includes $260 million in assessed contributions and $698 million in voluntary contributions. The WHO's 2024–25 programme budget is $6.83 billion. This is a slight increase from the 2022–23 budget of $6.726 billion. The other leading contributors to WHO include Bill & Melinda Gates Foundation (13.67 per cent), GAVI Alliance (10.49 per cent), European Commission (7.82 per cent) and World Bank (4.02 per cent). While India's share is about 1.58 per cent and China contributes about 0.35 per cent.

President Trump was not happy with the way things have been moving with WHO. He had decided to withdraw the USA's membership from the WHO in 2020 during his first term. On May 29, 2020, President Trump announced the USA would sever its relationship with WHO and redirect funds to US global health priorities. On July 6, 2020, the US administration officially notified UN Secretary-General António Guterres of its intention to withdraw from WHO membership. In response, 750 leaders from academia, science, and law have urged the US Congress to block the president's action. Later, this move was reversed by the Biden administration in 2021.

Reacting to Trump's move, China said that it would continue to support WHO in fulfilling its duties, as WHO plays a central coordinating role in global health governance, and its role should be strengthened, not weakened. Regretting the USA announcement, the WHO in a statement claimed that for over seven decades, the WHO and the USA have saved countless lives and protected Americans and all people from health threats. Together, they ended smallpox, and brought polio to the brink of eradication. American institutions have contributed to and benefited from membership in WHO. It hopes the USA will reconsider and look forward to engaging in constructive dialogue to maintain the partnership between the USA and WHO, for the benefit of the health and well-being of millions of people around the globe. Meanwhile, on January 25, at a rally in Las Vegas President Trump said that he may consider rejoining the WHO, if they would clean up their act.

According to The Lancet report dated August 1, 2020, the withdrawal from WHO would have dire consequences for US security, diplomacy, and influence. WHO has unmatched global reach and the US administration would be hard pressed to disentangle the country from WHO governance and programmes. Once departing from the WHO, the USA would find itself on the sidelines, lacking global clout to advocate for essential changes. Additionally, independent US programmes could never replace a genuinely global agency. In the absence of treaty obligations, a multipolar world means that there are no assurances that nations will collaborate with the USA. Health and safety in the USA and worldwide necessitate strong cooperation with WHO. The USA cannot sever connections with WHO without causing significant disruption and harm, leaving Americans much less safe. BS

Narayan Kulkarni
Editor
narayan.kulkarni@mmactiv.com

"We Communicate directly with **Life-Science** Leaders and **BioPharma** Executives **World-Wide**"

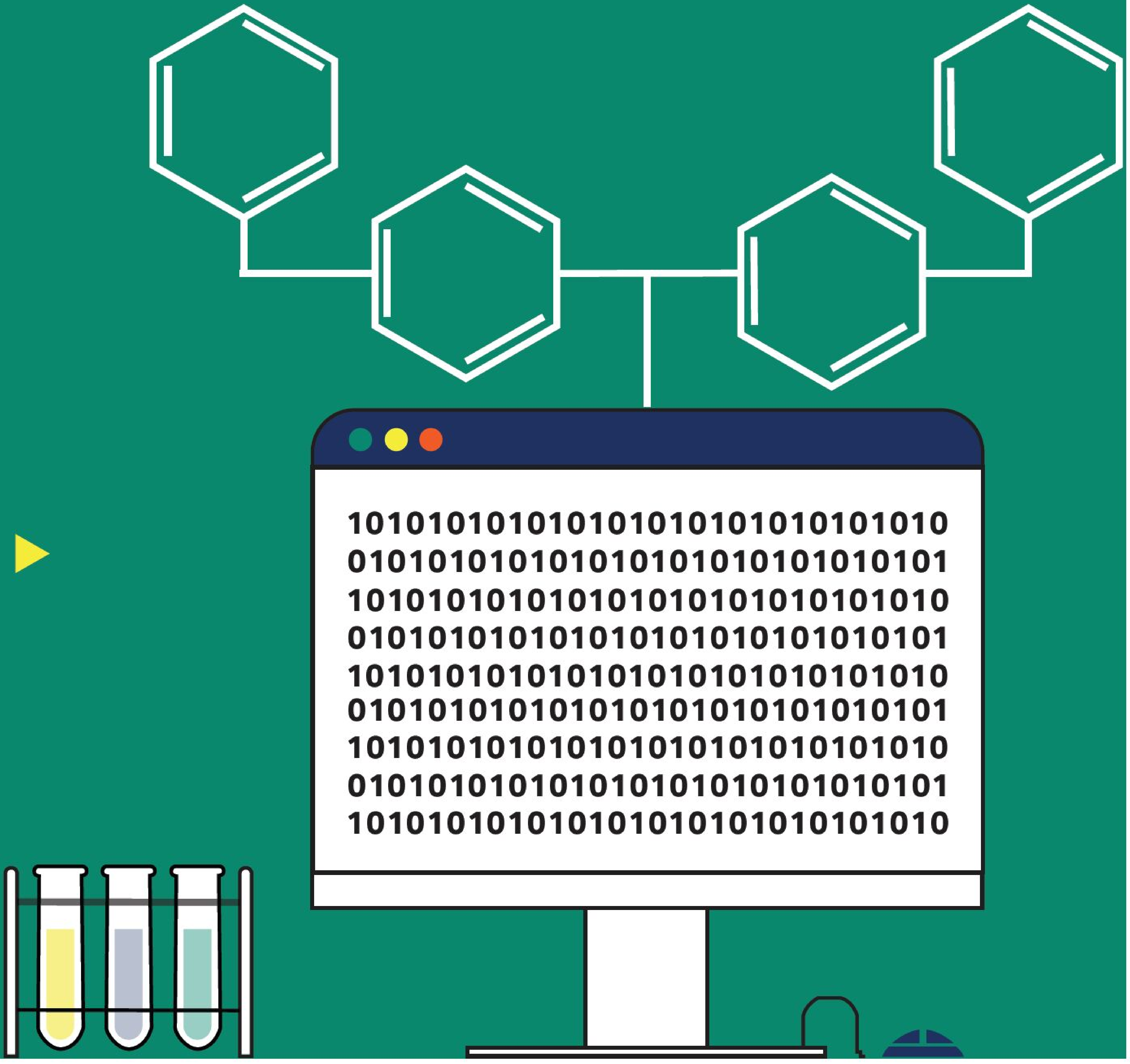
BioSpectrum the business of Bio & Health Sciences
ASIA EDITION

BioSpectrum the business of Bio & Health Sciences
www.biospectrumindia.com

For More information , Please contact ankit.kankar@mmactiv.com cytiva

Go faster and smarter with *in silico* process development

Learn more ▸


10101010101010101010101010101010
01010101010101010101010101010101
10101010101010101010101010101010
01010101010101010101010101010101
10101010101010101010101010101010
01010101010101010101010101010101
10101010101010101010101010101010
01010101010101010101010101010101
10101010101010101010101010101010